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1016.

SAILING DIRECTIONS

FOR THE

STRAIT OF GIBRALTAR

AND THE

MEDITERRANEAN SEA:

COMPREHENDING

THE COASTS OF SPAIN, FRANCE, AND ITALY,

From CAPE TRAFALGAR *to the entrance of the* GULF *of* VENICE;

THE BALEARIC ISLES, CORSICA, SARDINIA, SICILY, AND THE MALTESE ISLANDS;

THE COASTS OF GREECE AND IONIAN ISLANDS; THE NAVIGATION TO SMYRNA, AND

THE AFRICAN COAST,

From TANGIER *to* ALEXANDRIA, *inclusive:*

INCLUDING DESCRIPTIONS OF THE LIGHTHOUSES, AND TABLES OF POSITIONS, OR OF LATITUDES AND LONGITUDES, OF ALL THE PRINCIPAL POINTS, &c.

SELECTED AND ARRANGED FROM THE NEW DIRECTORIES FOR THE MEDITERRANEAN SEA, GULF OF VENICE, BLACK SEA, &c.

BY JOHN PURDY, HYDROGRAPHER,

TO ACCOMPANY THE CHARTS RECENTLY PUBLISHED.

LONDON:

PRINTED FOR R. H. LAURIE,

Chart-seller to the Admiralty, the Honorable Corporation of Trinity-House, &c.

NO. 53, FLEET STREET.

1841.

1016.

*** COMMUNICATIONS FOR THE FUTURE IMPROVEMENT OF THIS WORK ARE RESPECTFULLY SOLICITED.

[Entered at Stationers' Hall.]

ERRATA, &c.

Page 3, line 3, read 4½ miles S.E. [*S.* 67° *E.*]

Page 58.—At CASSIS there is now a Harbour-light from the 1st of November, 1840. The tower is on the left side of the entrance; its light is fixed, and seen to the distance of three leagues.

Page 58.—LA CIOTAT.—A new tower, first lighted on the 1st of November, 1840, has been constructed on the head of the *New Mole*, at 120 yards to the south-eastward of the light on Fort Berouard. Both lights are fixed, and seen at an equal distance; they cannot, therefore, be mistaken for that of Cassis.

To the announcement of these new lights it was added that, from the same date, a small fixed light would be exhibited on the fort of the *Isle of St. Marcou*, in the English Channel, latitude 49° 29′ 55″, and longitude 1° 9′ W.

Another at *Port Navalo*, on the eastern side of the entrance of the Morbihan, Bay of Biscay.

The Lighthouse of the *Bassin d'Arcachon*, mentioned in the Directory for the Bay of Biscay, (page 26) has been lighted from the date above-mentioned.

Page 245.—MOROCCO should be *Marocco*, the *Marokh* of the Arabs; antient *Mauretania*.

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The NEW CHART, which this Book is intended to illustrate, is entitled, "GENERAL CHART of the MEDITERRANEAN SEA, and a portion of the EUXINE or BLACK SEA; with PARTICULAR PLANS of the PRINCIPAL HARBOURS." Composed and Reduced, chiefly, from the ACTUAL SURVEYS of Officers in the Royal Navies of Great Britain, France, Spain, Portugal, Naples, and Austria; which include, among others, the distinguished names of BEAUFORT, W. H. SMYTH, TOFINO, ZANNONI, CAMPANA, VISCONTI, GAUTTIER, BERARD, TAITBOUT DE MARIGNY, &c.

The Thirty-two particular Plans of Harbours, &c., given on the same, are as follow:—Strait of Gibraltar; Bay of Gibraltar; Tangier; Malaga; Cartagena; Alicante; Tarragona; Barcelona; Marseille; Genoa; Leghorn; Elba; Strait of Bonifacio; Bay of Naples; Strait of Messina; Palermo; Maltese Isles; Valetta, &c.; Trieste; Channel of Corfu; Bay of Oran; Algier; Bujeya or Bougia; Bona; Tunis; Tripoli; Canea in Candia; Bomba; Alexandria; Coast of Egypt and Abukeer Bay; Channel of the Dardanells; and Bosphorus or Channel of Constantinople.

(Price of the Chart with Book of Directions, 14s., of the Chart without Directions, 12s. The Book is not sold separately.)

*** To the FIRST VOLUME of the larger Directory, from which the present work has been selected, has lately been prefixed a great variety of Additional Information, both for the WESTERN PORTION of the Mediterranean and for the LEVANTINE SEAS; particularly for the coasts and islands of Greece, the Archipelago, Dardanells, Syrian Coast and Harbours, and Northern Coast of Africa.

SAILING DIRECTIONS, &c.

*** THROUGHOUT THIS WORK, THE GIVEN LONGITUDE IS THE LONGITUDE FROM GREENWICH. *The* BEARINGS *and* COURSES *are those by* COMPASS, *unless* WHERE OTHERWISE EXPRESSED: BUT THOSE GIVEN THUS, [*W.S.W.*] SIGNIFY THE TRUE; AND THE GIVEN DIRECTION OF WIND, TIDE, *and* CURRENT, IS ALWAYS TO BE CONSIDERED AS THE TRUE.

THE *present* VARIATION *of the Magnetic Needle*, in the Strait of Gibraltar, is 22½ degrees West: Near the Isle Alboran, and thence to Cape Palos, 22 degrees: At Mallorca, or Majorca, and thence to Corsica, 21½°: Off Cape St. Sebastian, 21°: Marseilles, Toulon, and Hyeres, 19° 40′: Genoa, 17°: Strait of Bonifacio, 18° 45′: Isle of Elba, 18°: Mouth of the Tiber, 17° 30′: Bay of Naples, 17°: West end of Sicily, 17° 30′: Æolian Isles, 18° 50′: Messina, 18° 30′: Syracuse, 17° 45′: Malta, 18° to 17° 20′: Pantellaria, 17°: Linosa, 16° 43′: At Tetuan, 22° 30′: Bay of Tunis, 18°: Cape Mesurata, 16° 50′.

In the Eastern or Levantine Division;—Cape Spartivento, at the entrance of the Gulf of Venice, 17° W.: Brindisi and Barletta, 16°: Ancona, 17°: Trieste, 17½°: Corfu, Paxo, and Sta. Maura, 15°: Cephalonia and Zante, 14¾°: Scio, 14½°: Marmorice and Karagatch, 13°: Kastelorizo, 12°: N.W. end of Cyprus, 11°: Gulf of Iskenderoon, 10°.

On the African Coast, at Cape Mesurata, 16° 50′: Cape Rasat, 14° 12′: Alexandria, 12°: and Damiat or Damietta, 11½° West.

All these conclusions have been deduced from observations made in the British ships of war on the Mediterranean station.

I. *The* STRAIT *and* BAY *of* GIBRALTAR, *from* CAPE TRAFALGAR *to* GIBRALTAR, CAPE SPARTEL *to* CEUTA, *and thence to* TETUAN.

This Section is arranged as follows:—1. DESCRIPTION of the SPANISH COAST from Cape Trafalgar to Gibraltar.—2. The AFRICAN COAST, from Cape Spartel to Ceuta and Tetuan.—3. The TIDES and CURRENT.—4. DIRECTIONS for SAILING, both from the WESTWARD and EASTWARD.

GEODETIC POSITIONS.	Latitude. North.			Longitude. West.		
EUROPEAN COAST:—Cadiz Observatory	36°	32′	0″	6°	17′	30″
St. Sebastian Lighthouse	36	31	10	6	18	42
Cape Trafalgar	36	10	15	6	1	30
Tarifa Lighthouse	36	0	50	5	36	10
Europa Point; Lighthouse	36	6	20	5	19	46
AFRICAN COAST:—Cape Spartel	35	47	40	5	54	40
Tangier; centre	35	47	30	5	48	0
Ceuta; Almina Point	35	54	4	5	17	0

1. The SPANISH COAST, from Cape Trafalgar to Gibraltar.

CAPE TRAFALGAR, by the antients called the *Promontory of Juno*, is not high, but may be known by its remarkable figure, being flat, and terminating with two sharp corners, or angles. A round tower stands on the eastern corner. To the eastward of the flat the land is very uneven and mountainous. East of the flat land are high sandy cliffs, but none to the westward. Between the Cape and Castilobo, to the north, the coast is low and sandy, excepting a few rocky points, equally low with the rest, and of which one extends outward to the distance of more than a cable's length.

The Altos or Heights of Meca, to the north-eastward of Cape Trafalgar, are very level on the summit, and appear to be divided into two parts, spotted with green clumps, and a few patches of white sand.

The Tower of Meca is a league to the S.E. by E. ½ E. [*E. ½ S.*] of Cape Trafalgar. Between is seen a patch of sand, called the *Boqueron*, useful as a mark for the shoals in the offing. A little more than two-thirds of a mile E. by S. [*E. by N.*] from the tower of Cape Trafalgar, the beach is low, and has a small creek, with some rocks lying before it. This is called the *Barcudero of Meca*, and here water may be obtained. Vessels may anchor off this place, in a convenient depth, on clear ground, sheltered from north-westerly, northerly, and north-easterly, winds.*

E. ¼ N. Cape Trafalgar, with the pitch and tower E. ¼ S about 3 leagues. E. ¾ S.

BANK off TRAFALGAR.—A bank of sand, extending one mile and a half N.N.W. and S.S.E., lies at the distance of between 3 and 4 miles from Cape Trafalgar. Its least depth is 3 fathoms, but around it are from 8 to 10 fathoms, at a short distance. The north end bears N.W. by W. ½ W. [*N. 83° W.*] 3¾ miles from Cape Trafalgar; and here the tower on that cape appears in a line with the Tower of Meca. The S.W. end bears W. ¼ N. [*W.S.W. ¼ W.*] 2¾ miles from Cape Trafalgar, and S.S.W. [*South*] from the tower of Conil. From this end, the tower of Trafalgar appears in a line with the sandy spot called the Boqueron.

The Shoal of Aceytera.—This is a reef or chain of rocks, extending North and South about one mile, and about two cables' length in breadth. The least depth is a fathom and a half at low water; but, in the intervals between the rocks, there is as much as 5 fathoms. The N.W. end lies W.N.W. ¾ W. [*S. 80° 15′ W.*] nearly two miles from Cape Trafalgar, and the S.E. end W.S.W. ¼ W. [*S.W. ¾ W.*] at about the same distance from that cape.

Between the shoal of Aceytera and Cape Trafalgar, in an extent of half a mile, there seems to be a boiling in the water, with the appearance of breakers. This is merely the effect of the counter-currents, there being, in general, no danger; and it is, therefore, called the *Risa*, or Laughter, of the cape. It may, perhaps, with more propriety, be called the Race *of Trafalgar*. With westerly wind it is the outermost of those whirlpools of the Strait, which will be described hereafter.

During a heavy swell, with wind unsteady, it would be imprudent to attempt the passage between Cape Trafalgar and the shoal of Aceytera, as the sea then rolls deeply; and should the wind fail, you may be obliged to come to an anchor in an exposed situation, and on bad ground.

From Point Meca to the Isle Tarifa the coast is irregularly formed by the rocky points *Sara, Camarinal, Plata, Paloma*, and *Peña*, connected by sandy coves, (as shown on the charts,) the eastern sides of which afford occasional shelter. Sara Point is of moderate height near the sea, but shortly forms a mountain, with two towers, or other buildings, on its summit. The Camarinal is low, but has a watch-tower on it, and rocks stretching about half a mile out to sea. Cape Plata is the extremity of a mountain,

* The shoals and coast between Cadiz and Cape Trafalgar are more fully described in our Directory for the coasts of Spain and Portugal, 1839.

gradually

gradually declining to the point, which has some rocks about it. The interior of the country, all the way from Meca Point to this cape, is hilly, and of considerable height.

The TOWER of PALOMA, on the point of the same name, is 4¼ miles S.E. ¼ E. [*S. 72° E.*] from Cape Plata. Some large low rocks extend before it. Between is the Ensenada, or Cove, of Balonia,* affording good anchorage and shelter, for ships of all sizes, at half a cannon-shot from the shore.

TARIFA or TARIFFA, formerly an isle, is now a little peninsula, connected to the main by a sandy causey. It is small and low, but has, from the year 1813, been distinguished by a lighthouse, which exhibits a *revolving* light. On the outside, the water is generally deep; but, on the S.W. side, is a rock, the *Maroquina*, sometimes covered, and lying at half a musket-shot from shore.

CABEZOS.—The SHOALS called the BAJOS DE LOS CABEZOS, lie to the southward and south-eastward of Paloma Point. Of these there are four, the outer and least dangerous being the *Placer Nuevo*, or *New Shoal*, extending a mile E.S.E. and W.N.W. Of this bank, the shoalest part, near the west end, has 7½ to 8, and the rest of the bank 9, fathoms, fine sand. It lies on the parallel of 36 degrees, 5½ miles true West from Tarifa light; and from its centre Paloma Point bears N.N.E. [*N.*] 3 miles.†

The *Cabezos*, proper, lie at three-quarters of a mile E. by N. from the Placer Nuevo. In the channel between are from 8 to 12 fathoms. This channel lies with Tarifa light bearing S.E. by E. ¼ E., and thus you may pass through in 12 fathoms. On the late chart the shoalest water marked on the shoal is 5½ feet; though a former description states that, in low tides, there is so little water on them as to reach only to the mid-leg of the persons who collect shellfish upon them; but, at a short distance, are from 2½ to 3 fathoms; and, at a little farther, from 7 to 11 fathoms. Many vessels have been lost here, and few that have touched have been gotten off without some damage.

The *Placer del Oeste*, or Western Shoal, lies at half a mile from the Cabezos, and has over it from 2½ to 5½ fathoms. From the middle of this bank Point Paloma bears N.N.E. one mile and a half. The ground between is rocky, and in mid-channel are from 14 to 18 fathoms, shoaling thence to the point.

The *Bajeta* lies a mile and a half E.N.E. from the Cabezos, and a mile W.S.W. from *Punta de la Peña*. In the channel between are from 3¼ to 11 fathoms. On this shoal are from 5½ to 14 feet of water, and from its centre the lantern of Tarifa bears S.E. by S. 3¼ miles. The ground between is of sand; depths 7 to 21 fathoms.

On the main, to the north of Tarifa Isle, stands the fort of *Santa Catalina*; being placed upon a little hill, it appears, at a distance, like an island. At *E.N.E. true*, about a mile from Santa Catalina, is Camorro Point, high, broad, and steep, with rocks about it; and between stands the town of TARIFA, at the foot of Mount Cabrito. In the cove, small vessels may be sheltered from westerly winds; and, in favourable weather, large vessels may anchor to the eastward of the isle opposite to the sea-gate of the town, in from 15 to 18 fathoms.

POINT GUADALMESI, which lies East 4¾ miles from the lighthouse of Tarifa, is high and precipitous, with a watch-tower on its summit. On its eastern side is a small cove, with a deep valley, covered with gardens and orchards. From this point, at the distance of two miles and two-thirds more to the eastward, is the eastern point of *Açebuche*, the western point of which is a little within to the westward: both are surrounded with rocks, some above water, but not far without the land.

In the bay between Guadalmesi Point and the Points of Açebuche, one mile within the latter, is the castle of Tolmo, off which there is anchorage for small vessels, and shelter from northerly winds, in from 8 to 6 fathoms, good holding ground.

PUNTA FRAYLE, or *Friar's Point*, is about a mile E. ¼ S. [*N. 65½° E.*] from the eastern point of Açebuche. The land is very high, but slopes to the sea, and on its summit is a watch-tower. Close to the point is an islet, that looks like a friar, with several rocks about it.

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* Here, according to D'Anville, stood the antient *Bœlon*, the usual place of embarkation for Tingis, now Tangier.

† On the site of this bank there has been said to be a rock on which the *Thisbe* frigate struck some years ago. It proves to be imaginary only. The Thisbe must have struck upon the *Cabezos*.

it. On the eastern side of the point is a sandy cove, in which small vessels may be sheltered from north-westerly winds.

CAPE CARNERO, with Cabrita Point, lie, as shown in the plan of the Bay of Gibraltar, about two miles to the north-eastward of Punta Frayle, and within, on the S.W., is the little isle called *Palomas* or *Pigeon Island*. On the summit of Cape Carnero is a castle and watch-tower.

LA PERLA, or the PEARL, is a rock, having over it, in one spot, but 9 or 10 feet at low water; but, at two ships' length from it, both toward the land and on the outside, are from 7 to 9 fathoms. The mark for the shoalest part is, Pigeon Island in one with the third rising from the point of Carnero; a peaked rock, off the same point, in one with a hill that makes like a sugar-loaf, with a small saddle on the top of it, which stands to the eastward of S. Roque; and the tower on Punta Frayle bearing W.N.W. [*West.*] The town of S. Roque may be readily known, as it is seated on the top of a small hill; and there is no place so situated for which it can be mistaken.

BAY of GIBRALTAR.—From Cabrita Point, or that of Carnero, *N. ½ W. true* nearly two miles, is the broad point and tower of S. Garcia; between is Getares Bay, or rather Cove, having a good depth of water, and good ground, excepting near the rocky points; but it is completely open to easterly winds, which send in a heavy swell.

The coast hence to the northward presents numerous rocks, surrounded by which is the isle of *Algeciras*, called *Verde* or *Green Island*. This is of moderate height, and fortified. From the island, toward the S.W. and N.E., the chains of rocks extend so much in a straight line, as to appear like an artificial wall or pier, with channels sufficient to admit feluccas. The rocks on the eastern part do not project so far from it, but are equally parallel with the rest. The Mole of Algeciras is about half a mile from Isla Verde, and admits coasting vessels at high water. At half a cable's length east from the Mole is the *Galera*, a rock even with the surface of the water, with a reef on its N.E. side, and there is another shoal, with some rocks off the town.

ALGECIRAS was formerly a considerable port. It is agreeably situate on a gentle slope by the sea-side; and a little river, the *Miel*, which rises in the neighbouring mountains, passes its southern side, and thence runs gently on to the sea. At three-quarters of a mile from the Fort of S. Antonio, which stands at the north end of the town, is the tower of *Almiranta*, on a point of moderate height, surrounded with rocks and stones.

At the distance of 2¾ miles, to the northward, from the Isla Verde, is the bar of the River Palmones, which river is resorted to in winter by the trading vessels of Algeciras. *Punta Mala* on the eastern side of the bay, opposite to the River Palmones, is a little elevated, and has a castle upon it, which is situated at nearly a mile and a quarter to the north-westward of Fort S. Philip, which stands at the west end of the Spanish lines. From Point Mala, a ledge of rocks extends to the S.W. about two cables' length, some of which are above water. Northward of the point, at three-tenths of a mile, is the Hospital de la Sangre.

GIBRALTAR.—From the fortified line, which separates GIBRALTAR from the Spanish territory, the land is very low and flat, but thence rises, abruptly, the north side of this celebrated promontory, to its rugged summit, which is 1,400 feet above the level of the sea, and commands a most extensive view of Spain and Africa. The town, which is situated on the western base of the mountain, contains about 10,000 regular inhabitants, and the garrison commonly amounts to 5,000 more. The number and strength of the military works, and the vast galleries opened in the calcareous rock, excite admiration. The fortress, in the opinion of most military men, is absolutely impregnable.

The eastern side of the mount is very steep, but the western side so declines to the sea, that the town is erected on its base. From the north end of the town, the old Mole extends, in a true N.W. by W. direction, about 1,100 feet: the New Mole, at a mile and a half to the southward, extends 700 feet to the N.W. The latter, with an elbow formed by the shore, affords shelter for several vessels, even ships of war, which in winter may moor under it: the farthest out in from 5 to 6 fathoms.

On the WESTERN SIDE of the BAY a vessel may come to an anchor at half a mile from Cabrita or Carnero Point, in from 18 to 27 fathoms, fine gravel and sand, and even outward to 38 fathoms. The same depths may be found to the northward, toward Point S. Garcia, but there the ground is not good. The best and most secure anchorage, at all times, is, however, from off the centre of the town of Algeciras toward the River Palmones and

and Bridge of Mayorga, or River of St. Roque: the limit commences when you have passed the line on which Point Carnero appears in one with the middle of Apes' Hill, in Africa, and the Rock la Galera in one with the south end of Algeciras. The best station is to the northward, toward the Palmones; or more to the eastward, at half a mile from shore. It is requisite to sound before the anchor be let go, lest the depth be too great.

ANCHORAGES.—Vessels may come-to, also, from the Bridge of Mayorga or St. Roque, all the way to St. Philip's Castle, only avoiding the foul ground near the reef of Point Mala, already described. Hence to the Old Mole of Gibraltar the ground is good, and at the latter is the usual anchorage of English vessels; the smaller by the Mole, and the larger farther out. Before the space between the Old and New Moles, vessels likewise anchor, in whatever depth may be preferred; at about half a mile from the fortifications; not nearer, as there are rocks along shore; nor farther off, lest they miss the bank. Ships may also ride between the New Mole and Europa Point, at the same distance from shore, although in deeper water.

To the Remarks on, and Description of GIBRALTAR, given above, the following may be added.

To avoid the Pearl Rock, which lies off Pigeon Island, and which has no more than 10 feet of water on it, be sure not to bring Europa Point to the eastward of E.N.E. until the town of St. Roque be open of Carnero or Cabrita Point. You may then stand into the bay and take up an anchorage.

To anchor on the N.E. side of the Bay, off the *Old Mole*, open the *Devil's Tower*, which stands at the N.E. extremity of Gibraltar; you may then steer for it, and anchor in what depth of water you please. In time of war ships anchor off the New Mole: they bring the head of that mole to bear S.E. or S.E. ½ S., and let go the best bower in 20 or 22 fathoms of water. You moor with the small bower to the S.E. in 11, 12, or 13, fathoms, and will then have 14 or 15 fathoms under foot, and the head of the Old Mole bearing N.N.E.* Water may be had in *Rosia Bay*, at the back of the Old Mole; but at this place there is not sufficient quantity for a fleet.

The most dangerous wind, and that which causes the most sea here, is from South to West; and it would not be advisable to anchor in a gale from that quarter, unless absolute necessity requires you to do so.

Wood may be obtained here in small quantities only; but provisions, fruits, and wines of all kinds, may be had in great plenty in time of peace with Spain. In time of war fresh provisions are very scarce and very dear: being mostly brought from the Barbary coast. It is well known that a great trade is carried on at Gibraltar with the coast of Barbary and different parts in the Mediterranean, and also, an inland trade with Spain.

In the New Mole there is a dock-yard, with a sheer-hulk and a careening-wharf, where ships of the largest size may be hove down.

Gibraltar is defended by about 400 pieces of cannon. The town has two wide streets and several narrower ones: it stands on a rock, but has a number of trees and shrubs regularly planted in different parts, with neat little kitchen-gardens, and the buildings generally are neat and regular, standing one above another on the side of the rock. The roadstead is not altogether safe for shipping, and particularly to boats under sail, which are subject to heavy squalls.

LIGHT-HOUSE on EUROPA POINT.—The VICTORIA TOWER, a light-house on Europa Point, was building in the year 1840, the foundation stone having been laid, with great solemnity, on the 26th day of April, 1838. The tower stands on a platform 38 feet square, the diameter of the column at the base is 27 feet, and its height 60 feet. The building is of hewn stone, crowned with a lantern ten feet high, which is to contain a very powerful light.

The *Cacafogo*, gun-boat, was some years ago lost on a rock which lies about 300 yards to the north-eastward of Europa Point, and sometime afterward the Commissioner's yacht

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* Another Journal says, The best anchorage is with the Devil's Tower just open to the northward of the Rock, and St. Roque's church in one with a barbet-battery on Point Mala, where you will have from 15 to 18 fathoms, sandy bottom. It is best not to shut in the Devil's Tower, as there the bottom is very foul. In working into the bay, with an easterly wind, stand to nearer to Point Mala than three-quarters of a mile, as there are rocks without it.

narrowly

narrowly escaped the same fate. The rock is a pinnacle, of small size, and a line-of-battle ship may pass inside of it. In moderate weather a vessel may anchor off Europa Point, in 10 fathoms, on clean sand, at a considerable distance from shore.

2. THE AFRICAN COAST, FROM CAPE SPARTEL TO CEUTA AND TETUAN.

The AFRICAN COAST.—CAPE SPARTEL, high and precipitous, is the N.W. point of the State of Marocco; its bearing and distance from Cape Trafalgar are S. ¼ W. [*S.* 13° *E.*] 22½ miles. The cape, at a distance, appears like an island, and is so elevated as to be seen, in clear weather, at the distance of 14 or 15 leagues. The outer point, when seen from a short distance to the westward, appears uneven, with eminences on it like hummocks, and the high lands resemble the awning of a galley. The ground about the Cape is quite clear, with the exception of some high rocks, which are steep-to. *(See Atlantic Memoir, 1840, page 282.)*

Between Cape Spartel and the western point of Tangier Bay, a distance of five miles, the coast is high and clear, but bordered with rocks, and there is one rock, the *Pacifico*, discovered in 1818, which lies at three-quarters of a mile N.N.E. [*North*] from Tangier Point. Depths between, 11 to 20 feet. A reef extends around the point to the distance of two cables' length: here the ground is of gravel and small stones.

CAPE MALABATA or Malabat, the eastern point of Tangier Bay, is 3 miles E. ¼ S. [*E.N.E.* ¼ *E.*] from Tangier Point. This projection, also, is surrounded by a reef, but not so extensive a one as the former. At about three-quarters of a mile N. by W. ½ W. from the cape there is, however, a rock, on which the Excellent, a 74-gun ship, struck some years ago. While the ship was on the rock, there was found to be a depth of 6 fathoms on one side, and 5½ on the other. She was over in less than a minute. This rock, named the *Almirante*, has 3 fathoms over it, and lies at a mile N. by W. [*N.W. by N.*] from the cape.

TANGIER BAY.—The town of TANGIER, antiently called *Tingis* and *Tingia*, which stands on the western side of this bay, is now a place of little consideration, and contains about 6,000 inhabitants. The Spaniards visit this place for eggs, fowls, vegetables, and some fruits; but the chief exports are cattle and edible vegetables, which are taken to Gibraltar for the supply of the garrison. The Bay affords convenient anchorage for vessels of all sizes, opposite to the town, in from 9 to 12 fathoms, sand: but, it is to be observed that, on the eastern side there is a rocky ledge, bearing S.E. ¼ E. from Tangier Point, and S.W. by W. ½ W. from Cape Malabat. This Cape, in a line with Europa Point, Gibraltar, leads clear of the shoal, and the anchorage, therefore, lies with Gibraltar open of the Cape. Ships moor to the N.W. and S.E. with the longest cable to the N.W., and it will be proper to buoy up and protect the cables, as they may be exposed to injury from the hard roots of large sea-weeds, which grow in the bottom of the bay, as well as from coral, hereafter described.

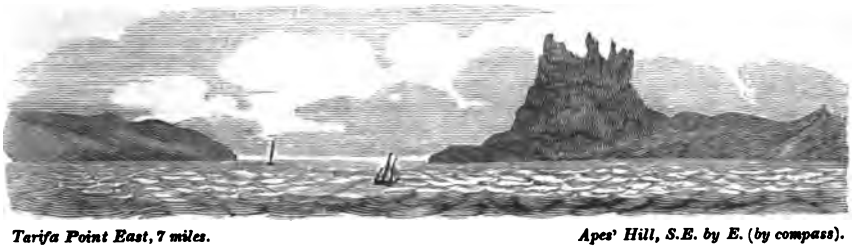
A large mooring chain has been discovered in the western side of Tangier Bay; it is supposed to have lain there from the time of Charles II., King of England, and to have caused the loss of many anchors; a loss attributed to the roots of sea-weeds, &c. It lies nearly in a true E. and W. direction, north of the parallel of the town, and from one-fourth to more than one-third of the breadth of the bay from the western shore. The Road or best ground for anchoring is between this chain and the reef on the eastern side of the bay.

On the south side of the bay is a high and pleasant-looking hill, and about the town is a wall and some fortifications. On the shoalest part of the ledge, above mentioned, the depth is only 12 feet, and there are 5 fathoms, on rocky bottom, close to it: it is about three-quarters of a mile off the shore, and not more than 3 or 4 fathoms in length. Between it and the eastern shore are 10 fathoms of water, and at the distance of about 10 fathoms from it are 7 fathoms. On entering the bay with an easterly wind, you may borrow toward Point Malabat at pleasure. From the anchorage, in 8 fathoms, the north end of Gibraltar, open of Malabat Point, bears N.E. by E. ¾ E. [*N.* 41° *E.*]; the old bridge of Tangier, S. ¼ W.; the old tower of Malabat, E.S.E. ¾ E. and the town of Tangier, N.W. by W. ¾ W. about one mile and a half distant. There is broken coral all over the bay, and ships should never lie with more cable out than is sufficient to keep them from driving; and the cables should be rounded as far as 10 or 12 fathoms from the anchor. There is said to be a spot of

of clean ground, in 9½ fathoms, with the north part of Tangier town-wall on with a white patch on Cape Spartel, bearing W.N.W. ¼ W. [*W.* ¼ *S.*] and the pleasant hill above mentioned bearing from S.S.W. to S.W. by S. Easterly or Levant winds cause a heavy swell to tumble into the bay.

On full and change days, the tide in the bay rises 5 feet; the flood sets to the westward till 12 o'clock, but does not extend thus more than a mile and a half from the shore. See the remarks on the Tides, &c. hereafter.

TANGIER to CEUTA.—The whole of the coast from Tangier to Ceuta is rugged, and interspersed with rocks and projecting cliffs. The interior is high; and, directly *South*, true, from the bay of Gibraltar, is the *Jibbel D'Zatute*, or *Apes' Hill*, the *Sierra Bullones* of the Spaniards, and *Abyla* of the antients: this and the promontory of Gibraltar, *Calpe*, having been the *Pillars of Hercules*.



Tarifa Point East, 7 miles. *Apes' Hill, S.E. by E. (by compass).*

The Point of Alcazar, or Castle Point, which lies 9½ miles to the eastward from Malabat, is high, steep, and surrounded with a reef; between the two sandy coves, as shown in the Chart, in which there is anchorage close to the shore, in from 18 to 9 fathoms. Two miles from Alcazar Point is that of Sainar, which is low, and has several islets about it: between is the Cove of Alcazar, having a sandy beach and anchorage in from 15 to 20 fathoms.

A mile to the eastward of Sainar Point, is the Cove of Sainar, whence the coast extends, with various rocky points, one league N.E. ¼ E. [*N.* 25° *E.*] to a projecting islet on the point of Ciris, and which stretches to the northward from that point about two cables' length. The Point of Ciris is low, but gradually rises up to a sharp-cornered mountain, which, from its remarkable form, is called the *Gap of Ciris*.

At a mile and a half to the eastward of Ciris Point is that called Lanchones, half a mile beyond which is Cruces Point. The first is high, broad, and steep, with rocks at its base: the second is not so high, and more even: between is a bay, three-quarters of a mile in depth, with a flat beach, off which is anchoring ground in 15 fathoms. At rather less than a mile from Cruces Point is the broad point of Almanza, high and abrupt, and forming a cove with a small beach.

The northern part of Peregil or Canny Island lies three-quarters of a mile to the eastward from Almanza Point. It is merely a rock, lying along shore at the distance of a cable's length. There is a sunken rock near its N.W. point. Close to the outside is a depth of 18 fathoms. From over the middle of this isle the true bearing of the summit of Apes' Hill is *S.* 17° *E.*; and, as it lies near the foot of the mountains, and is of the same colour, it is often difficult to distinguish it from the main, even at a short distance, although it is high.

Leona Point, at a mile to the north-eastward of Peregil, is steep and of moderate height. It is distinguished by a large tower in ruins. Between it and Peregil there is anchorage in 8 fathoms. At a mile and three-quarters E.S.E. ½ E. [*S.* 83° *E.*] from Point Leona, is *Punta Blanca*, or *White Point*, which is high, abrupt, of a dark colour approaching to red, with the ruins of a tower on it, some islets at its base, and a rocky shoal at a quarter of a mile to the eastward of it. Between is Benzus Cove, wherein ships of any size may anchor, in 18 fathoms, bottom of sand, about two cables' length from shore, and be protected from south-easterly and south-westerly winds. From the anchoring ground the islets of Punta Blanca bear E. ¾ S.; a remarkable pyramidal peak, a little up the country, S. by W. ¾ W.; and Point Leona, in one with Tarifa, N.W. ½ N. [*N.* 62° *W.*]

At less than a mile from Punta Blanca, to the south-eastward, is Point Bermeia or Red Point,

Point, which, likewise, is high, and has a ruined tower upon it. The coast between is bordered with rocks, of which some are above the water. Without them the water is deep.

About three-quarters of a mile south-eastward from Bermeia Point is Benites Point, with the two low and flat islets of *El Campo*, to the eastward of which is the anchorage in the lesser Bay of Ceuta.

CEUTA.—The ALMINA is the peninsula, containing the suburbs and fortress of Ceuta. This place is well known as having been taken from the Moors, by John, King of Portugal, early in the fifteenth century, but was finally ceded to the crown of Spain in 1688, to which it continues to be annexed. The Almina extends about a mile and a half from East to West, and is surrounded with rocks. On its eastern and most elevated part is the *Acho*, or Castle of Ceuta, which stands in latitude 35° 54′, and longitude 5° 17′ W. To the westward of this are six little hills or eminences. On the western skirt of the Almina are the suburbs of Ceuta, then the city, which is fortified, between these and the main land.

The *Punta Sta. Catalina* is the northernmost point of the Almina; it is low, and has some islets and rocks about it. Between this and the rocky islets of El Campo is the anchorage in the lesser Bay of Ceuta, having from 13 to 8 fathoms, bottom of sand, with a few loose stones. Having opened the street called *Calle del Obispo*, (Bishop's Street,) which commences on the north side of the governor's house, this mark will lead to the spot. In every other part a bottom of gravel will be found. Ships moor with anchors to the N.E. and S.W.; the longest cables to the N.E.

The GREAT BAY of CEUTA, formed by the Almina Point in the North, and Cape Negro in the South, is 11 miles long in that direction, and 3 in depth. Ships of all sizes may anchor, in any requisite depth, almost through its whole extent, near the shore. The BAY of TETUAN extends to the southward from Cape Negro to Cape Tetuan or Mazari, a distance of 3 leagues, and is similar to that of Ceuta. In both, vessels are completely sheltered from westerly winds, but every precaution must be taken against winds blowing on shore. Should it not be thought advisable to anchor, a ship may keep under sail, on different tacks, in winter as well as summer, so as to be ready to take advantage of the first breeze of easterly wind, which may lead thence to and through the Strait.

The *Mount Negrona*, which stands at 7¼ miles nearly South, [*S. 24° 48′ W.*] from the Acho or Castle of Ceuta, is lofty and black. On its summit is a square tower. Cape Negro, which is 5½ miles S. by E. [*S.E. by S.*] from Negrona, is of moderate height, uneven on the surface, has a round tower on it, and is surrounded with islets.

TETUAN.—The RIVER of TETUAN falls into the sea at about a league and a half to the southward of Cape Negro: it admits boats and small craft at high water. At the entrance is a small castle of brick, and, at about a mile up, the custom-house. The city of TETUAN, which is 4 or 5 miles up the country, is said to contain 16,000 inhabitants, chiefly Moors and Jews, who, for the most part, speak a corrupt Spanish, in which language their commercial negociations are transacted. The environs abound in gardens of the most delicious fruits; the finest oranges in the world; exquisite grapes, &c.

Although no European is allowed to settle here, this port has carried on a considerable trade in provisions with Gibraltar, as vessels are obliged to come here, in preference to Tangier, whenever the wind is settled in the West. During the late war our fleets often watered and victualled here. There is an excellent watering-place, in particular, at a mile to the southward of Mazari, or Cape Tetuan, which Cape is distinguished by a white tower.

In the bays of Ceuta and Tetuan are some spots of foul ground, more particularly in Ceuta Bay, in the depth of 10 to 17 fathoms. At the watering place, in the south part of Tetuan Bay, on some slight compliments being paid to the governor, fresh provisions of every kind may be obtained, reasonably and in abundance, with wood for fuel. Here ships may ride in perfect safety, on a sandy bottom, in from 11 to 22 fathoms, with the wind at *North*, by the *West*, to *S.S.E. (true)* at two miles from the shore; but within that depth the ground is, in some places, rocky.

The mode of watering is by landing the casks, and rolling them over a sandy beach, of about 30 yards wide, into the river. The native Moors and Arabs are civil, but not to be trusted.

Ships have a better shelter in Ceuta than in Tetuan Bay; but, on account of its vicinity to the garrison of Ceuta, it is less frequented in time of war. When the easterly or Levant winds,

winds spring up, it becomes necessary to get under weigh. The approach of these winds is generally indicated by a swell or current from that quarter, and by a clear atmosphere for some hours before the passing clouds begin to cap the hills.*

3. THE TIDES AND CURRENTS OF THE STRAIT AND MEDITERRANEAN SEA.

STRAIT OF GIBRALTAR.—On both sides of the Strait of Gibraltar, the tides would be regular, were they not influenced, as they greatly are, by the winds.

From Cadiz the tide of flood sets toward Cape Trafalgar, where it is high water, on the days of full and change, at about V¼, but, at Tarifa, about XI¼, and at Gibraltar, XII¼, where it rises about 5 feet. The flood again sets from Europa Point to Cape Carnero, and from thence to Tarifa, &c. so that it meets the tide from the west off Cape Trafalgar, where it is low ebb at the time when it is high water at Tarifa. The tide, in this way, runs as far as 2 miles off the coast: and, at that distance off Tarifa, it flows until two o'clock. The tide is perceptible eastward as far as Malaga, where it rises about 3 feet, but at some distance beyond this it is scarcely perceptible. At Majorca and Minorca the tides are very irregular; rising and falling a foot or two, according to the winds.†

On the Southern Coast, from Cape Spartel to Apes' Hill, another tide runs along shore to the westward, as shown in the charts. In the great Cove, opposite to Tarifa, it is high water at 10 o'clock, but more to the West, near Tangier, at 12, and it continues in the offing an hour longer.

In the middle of the Strait, between the lines AA on the Chart, the current from the Atlantic Ocean sets generally to the East. This effect is supposed to be caused, in great measure, by the vast quantity of evaporation from the Mediterranean Sea, and the inefficient supply from its rivers: much also has been said on the existence and effect of under currents, which have been supposed to carry out a great portion of its water to the ocean. Near the shores, on both sides, are many changes, counter-currents, and whirlpools, caused by, and varying with, the winds.

In the MEDITERRANEAN SEA, generally, the TIDES are inconsiderable, mostly irregular, and, with respect to rise and fall, in many parts imperceptible, as the motion of the water in those parts seems rather owing to the impulse of the wind; notwithstanding this, the lunar influence is manifested, in many cases, by the changes of stream, and in others by the periodical rise and fall, both on the northern and the southern shores: Of both cases particular instances are given in the following descriptions, and they will be referred to hereafter.

We have shown, above, that, on each side of the STRAIT of GIBRALTAR, there is a Tide, setting outward and inward along each shore. From the vicinity of Malaga, and still farther to the East, the flood sets along-shore, westward, to Gibraltar, and thence along the Spanish coast, until it meets that from the West off Cape Trafalgar. On the African shore the flood-tide likewise runs along shore to the West, though irregularly, until it is lost in the Ocean, as explained in page 8.

But, in the middle of the Strait, the current from the Ocean *generally* sets to the eastward, and the boundary of this current, as nearly as it can be given, is delineated on the charts of the Strait by lines marked AA. It, of course, varies according to the circumstances of wind, &c.: it sometimes, though rarely, ceases; and there is, still more rarely, in lieu of an easterly current, a current setting *outward* to the West. This may be caused either by an extraordinary tide, or by a surcharge of water, aided by a prevalence of easterly wind, in the Mediterranean Sea: and it is the more particularly to be regarded, because it has long been assumed, as a fact, that the central current invariably sets *inward*, and *always*, of

* When Apes' Hill and the top of Gibraltar are covered with clouds, it is an indication that the Levanter or easterly wind will be of some continuance.

† The Tide-table, which has been heretofore given on the charts of the Strait of Gibraltar, has been copied from a very old document; it is not to be depended on, and has often been found to mislead; the tide and current being frequently blended.

course, affects the Ocean-water to the westward, inducing, to many leagues out, a general tendency to the same direction.

That sub or under currents, at times exist, and run counter to that on the surface, seems to have been proved by facts; but they have not been completely demonstrated, and a more full investigation is a desideratum.

The Mediterranean Sea, says a respectable writer, is said to be rather salter than the Ocean. That it is not more so, which might be expected from its daily loss by evaporation, has been ascribed to an under-current, salter than that of the Ocean, which runs out at the Strait, and unloads its waters of their excess of salt. The idea of a sub-marine current seems accounted for by the fact, communicated by Dr. Marcet to Dr. Carmichael, on the authority of the British consul at Valentia, that, some years ago, a vessel was lost at Ceuta, on the African coast, and its wreck afterward thrown up at Tarifa, on the European shore, about 17 miles to the W.N.W.

A similar fact is stated by Dr. Hudson: in 1712 M. de L'Aigle, of the Phœnix of Marseilles, giving chase to a Dutch ship near Ceuta Point, came up with her in the middle of the Strait, between Tarifa and Tangier, and there gave her one broadside, which sunk her. A few days after, the sunken ship, with her cargo of brandy and oil, arose on the shore near Tangier, at least 4 leagues to the West of the place where she sunk, and directly against the strength of the surface current; which has persuaded many that there is a *recurrency in the deep water in the middle of the Strait which sets outward to the ocean.* Phil. Trans. 1724. Vol. 33, p. 192. *See Dr. Marcet's Paper, on the Specific Gravity of Sea-water.* '*Edinb. Phil. Journal,*' Vol. II. p. 356.

Of the irregular deviations of the Gibraltar Current, one of the most remarkable was seen by Captain Livingston in 1822, when the current in the Strait, instead of setting in to the eastward, as usual, was found to be decidedly setting to the westward, all across, for some hours; the flood-tide, (at springs) having *over-run* the general easterly current, proven by temperature; the water at the surface, being 4½° warmer than at 6 fathoms down. Several vessels were carried right out to the westward. A Dutchman dodged it on the shore of Spain; Captain Livingston on that of Africa. About seven others, some in the centre of the Strait, were carried, from opposite Tarifa, very nearly as far as Cape Spartel.

Captain *T. J. Maling*, commanding H. M. ship Cambridge, on the coast of Peru, in a note addressed to Captain Livingston, 23d February, 1825, says, "I can have no objection to your making use of my name as that of one of the persons who can bear testimony that the current sometimes runs *out* of the Gut of Gibraltar much stronger than I ever knew it run *in* to the Mediterranean; but I believe this fact now to be known, as an occasional but not frequent occurrence, to all persons who have navigated the Mediterranean Sea, and no longer to be a disputed point.*

Captain *Barret*, an old trader to Gibraltar, informed Captain Livingston, in August, 1820, that, in his last voyage he had found the current set, for about three hours, decidedly to the westward, when he was off Tangier Bay; but the surface water appeared to be going to the eastward, while the westward current had hold of the vessel's bottom. Captain L. adds, An intelligent master of a London ship says that, when at anchor at Tarifa, he has found the tide running at the rate of 5½ knots; and Captain *T. Walker* says, he has been obliged to have a man at the wheel steering his ship for the tide, when at anchor under Cape Spartel.

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* Captain Livingston says, "I once found the water quite still off Peregil Point, at the foot of Apes' Hill, (East of Tarifa, contrary to my friend Reiner's statement,) and I could not be deceived, for I steered the same course by compass from within a mile of the Barbary shore until almost abreast of Europa Point, and all that time kept two remarkable peaks in Africa in a line. When near the entrance of Gibraltar Bay we began to feel the ebb-tide setting into the Mediterranean.

"Captain John Hogan, of Liverpool, who commanded the schooner Morning Star, (prior to me,) told me that at one time he was twenty-five days between Cape Trafalgar and Gibraltar, both wind and current being constantly unfavourable.

"We have now, at least, sufficient authority for the fact of the current sometimes setting to the westward.

"Don Tomas Vidal, of the college of S. Telmo, at Malaga, once, in a Spanish man of war off Tarifa, found the current setting strong to the westward.

"My respected friend, the late Captain Wm. Rogers, of the Countess of Chichester, Falmouth packet, and latterly commanding a packet on the Holyhead station, informed me that he twice found the current setting strongly out."

It

It is clear, therefore, that the current of the Strait is, in a degree, regulated by the tide, and will, according to the time of tide, set at the rate of from 3 to 6 miles. Westward of Tarifa, it sometimes, about the full and change of the moon, sets to the westward, quite across the Strait; but eastward of Tarifa it sets, more or less, to the eastward. To this information, communicated by Mr. *Ignatius Reiner*, Pilot, of Gibraltar, he adds, that with westerly winds, at the full and change of the moon, the current in the middle of the Strait, between Europa Point and Ceuta, sometimes sets at the rate of more than 7 miles an hour. At such times every point in the bay forms a whirl or an eddy, some of which are heavy and dangerous, at a considerable distance from shore.*

It follows that, *in general*, a vessel from the Atlantic, with an easterly wind, may easily beat through the Strait, into the Mediterranean, by keeping and tacking between the two boundaries of the central or eastern current; but always nearer to the coast of Barbary than to the opposite shore; the wind near this coast being always the more moderate; for even when in the vicinity of Tarifa, the east wind is strong to put a ship past her close-reefed topsails. Should the wind be very strong from the East, or the weather seem to threaten a tempest from S.E., take shelter, until it moderates, under *Cape Spartel*, before you attempt the Strait.

If, when in the Strait and bound eastward, there should be an indication of tempestuous weather from the S.W., it may be proper to run for, and take shelter behind, the *Almina* or *Ceuta Point*, in the Bay of Ceuta, where you may lie to, and find the wind and sea moderate. See, with respect to this bay and its anchorages, page 8.

MEDITERRANEAN SEA.—In settled weather, therefore, and under ordinary circumstances, when the great current has its regular course into the Mediterranean, we may calculate that, on the African coast, generally, a ship sailing eastward toward Sicily will be set a-head of her reckoning: for it has been ascertained that, between Sardinia and the main, the current, under such circumstances, sets eastward; as it does across the mouth of the Gulf of Tunis, and along the southern coast of Sicily. The current to the S.E., in the Channel of Malta, is at times so strong that ships have found it difficult to beat up to Maritimo; while others driven leeward of Malta, have been obliged to carry a press of sail, in order to hold their own until a change of wind enabled to make the island again. We may thus account, in some degree, for the loss of vessels in that region of mist and terror, the *Greater Syrtis*, or *Gulf of Sidra*, wherein there is a great swell and accumulation of water with N.W. winds.

The current doubtless continues eastward along the Libyan coast; and we have notices of its generally setting E.N.E. off Alexandria: thence advancing to the Coast of Syria, we find it setting northward, along that shore, where it acquires strength. *Captain* Beaufort has shown that, between Syria and the Archipelago, there is a constant current to the westward, slightly felt at sea, but very perceptible along shore, on a part of which it runs with considerable velocity. Opposed by the western coast of the Gulf of Adalia, it rushes with augmented violence toward Cape Khelidonia, where, diffusing itself in the open sea, it again becomes equalized.

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* *In the investigation of Currents*, the temperature of the different streams has become an interesting subject. On the 31st of August, 1820, the temperature in the Bay of Gibraltar, near the shore, was 62°; the deeper water, 64°. On standing across, southward, 65° and 66°; and at last, in the middle of the easterly current, it exceeded 70°. On the 14th of September, in the Bay, near shore, it was 69°, and in other parts 70°, after a fresh Levanter or easterly wind had prevailed for several days.

We find the following remark in Capt. Livingston's Journal of the 18th Sept. 1820. "First part of the twenty-four hours we seemed to be out of the general current, and in the tide-stream, as we evidently drifted nearer to Gibraltar, we stood off to get into the current, and did so. Before we entered it, the sea, at the edge of it, seemed to be two or three feet *higher* than elsewhere. When we got into it we had a considerable *swell*, though the water was very smooth before." A similar remark has, we believe, been made by Capt. Edw. Sabine, as to the elevated surface of the *Florida* or *Gulf Stream*.

The Depths of Water, in the middle of the Strait are remarkable. On the meridian of Tangier the central depth is 190 fathoms; on that of Tarifa about 400; on that of Gibraltar, 750 fathoms; and, at two leagues farther eastward, no bottom at 1000 fathoms. So that there is, from West to East, a regular inclined plane. This is given from the respectable authority of Captain W. H. Smyth, by whom the depths were ascertained.

4. Remarks and Directions, for the use of Vessels bound from Gibraltar westward, to the Ocean.

With a fair wind there can be no difficulty in passing hence through the Strait, attending only to the Tides and Current, as they have been described; but with an adverse or westerly wind it is far otherwise; and the following precautions and directions must be observed, in order to make the passage, which can be effected, under such circumstances, by small vessels only.

Directions *for small vessels bound westward, from Gibraltar, with westerly wind.*— In general, all fast-sailing vessels from the eastward, of from 30 to 60 tons, may pass through the Strait with a light wind from the West and N.W., by working as follows:

After weathering Europa Point, you enter Gibraltar Bay, and hence approach the *Ensenada de Getares* on its western side; and, when you find that the ebb-tide is making, you may approach Carnero Point, keeping at a moderate distance from the coast, and between it and the edge of the easterly current. The stream of ebb at Carnero Point runs south-westward toward the *Punta del Frayle;* and, on entering into the evolution of the tide off Point Açebuche, you may find the regular flux and reflux by keeping within the limits above-mentioned: by keeping this direction, as the eddies off Point Açebuche move toward the west, you will be carried by the force of the flood-tide into the *Cove of Tolmo.*

All this must be effected in the morning, at which time the wind is always off the land; and, from this reason it is advisable for vessels to anchor during the previous night in the Cove of Getares, until day-light: for it is not safe to work at night, all the coast being skirted with rocks.

Point Açebuche, which is 2½ miles south-westward from Point Carnero, is the most difficult point in the Strait to weather when the wind is from the west; for then it has several eddies about it, and is dangerous, particularly to the larger vessels, which require much attention in tacking; and none should approach too near, as all the coast from the Punta del Frayle to that of Açebuche is skirted with rocks, and the *Pearl Rock,* as already shown, (page 4,) lies at nearly a mile from shore. It is not safe to stand near the latter, for, when tacking seems most necessary, you may be prevented here by the eddies and the change of wind, and run the risk of being lost.

After passing Tolmo castle, which is a mile to the north-westward of Point Açebuche, while the tide continues favourable, short tacks are to be made; taking care not to fall within the line of the central or easterly current, which is clearly defined by a ripple. With a light wind care must likewise be taken not to stand in too near the shore, between the Points of *Torre de Guadalmesi* and *Camorro,* the ground to an extent of 3½ miles being very foul. Point Camorro is very dangerous, having many rocks about it, one of which lies at a cable's length from the shore.

When near Tarifa, with little wind, should the tide-stream begin to change, you must anchor in 9 or 10 fathoms, at about half a mile from the island, the lantern bearing West; for, by keeping under way, you would be swept to the eastward by the stream of ebb, and thereby lose all the labour spent during the flood; but, so soon as the tide again turns, you should get under sail, as the anchorage near Tarifa is not secure.

When you have advanced to the westward of Tarifa lighthouse, take care to avoid the *Cabezos* and other shoals, lying as described on page 3. In order to avoid these and secure your passage, it will now become necessary to stand over to the Barbary coast, keeping a good full, in order to get, as soon as possible, out of the strength of the central current, setting toward the East. After passing through this current, toward the *Cala Grande,* on the south shore, short tacks must be made, within and near the edge of the line of tide, so as to avoid the several rocks lying off, or extending from, shore.

After weathering the western point of the cove, *Cala Grande,* and the cove *Cala Baca,* it is necessary to tack, comparatively at a farther distance, owing to the great vortexes of the

the sea running rapidly toward the N.W. By working in this manner until after weathering Cape Malabat, you may thence work out at pleasure.*

Should not the flood be strong enough for weathering Cape Malabat, and the vessel be likely to be driven back by the ebb or contrary stream, it will be requisite to keep under cover of the cape, or to take shelter in the cove *Cala Grande:* because, with a stream setting eastward, there are eddies under the three points eastward of Malabat, which run to the west, and, therefore, regulate the tacks at a proper distance from the coast. This coast is very dangerous, there being rocks off the different points; and another reason for not attempting to anchor near it is, that the Maroquins, at times, conceal themselves behind bushes near the shore, and thence fire their long muskets, for the sake of plunder, of which the consequence may be fatal.

Having arrived to the west of Cape Malabat, when the ebb begins to abate, you may anchor, if desirable, in the Bay of Tangier, with the marks given in page 6. The best spots are in 7, 8, and 10, fathoms, gravelly bottom. During southerly winds, as well as easterly, the sea comes in very high into the bay, causing the vessels at anchor to roll very much; and even with a fresh wind from S.W., a very high sea and swell come round from Cape Spartel.

Large Vessels, *bound Westward.*—It would be useless for the commander of a large vessel to attempt a passage through the Strait of Gibraltar from the eastward, with a wind from the west; because the central current then runs to the East with great rapidity, especially during the new and full moon; and because the variation of the wind will not allow a large square-rigged vessel to approach near enough to the shore to take advantage of the eddies. In this case, if a ship has arrived from the east to a situation between Ape's Hill, on the coast of Africa, and the Point Acebuche, on the coast of Spain, the best way is to come to an anchor in the Bay of Gibraltar; otherwise she may be driven back into the Mediterranean Sea.

Great precaution must be taken in the Strait when there is a fog or haze, in order to keep in the middle as much as possible. The commanders of vessels of war, in particular, when cruising in the Strait, must be very careful during tempestuous winds from the East and S.E.; for such winds are accompanied by a very heavy and broken sea, and the current then runs with rapidity toward the N.W., that is, to the coast of Spain. It is, therefore, necessary, when to the eastward of Europa Point, and the Almina Point of Ceuta, to stand well over to the southward during the night, in order to avoid the fate of many vessels that have been wrecked at the back of the Rock of Gibraltar.

It is useless for the commander of a vessel, whether large or small, to continue in the Strait with a boisterous wind from S.W., as the eddies then swell the sea very much, and render it very dangerous, particularly in winter. The safest way of acting, in this case, is to run for the Bay of Gibraltar, and anchor in from 14 to 5 fathoms, in clear sandy ground, so soon as the Devil's Tower comes in sight.

5. DIRECTIONS for SAILING through *the* Strait, *both from the* Westward *and* Eastward.

Vessels bound to Gibraltar from the westward, having passed the Cabezos and Shoals, described in page 3, should haul in for the Spanish Coast, especially if the wind be to the northward of the west, otherwise the current may carry them to the eastward of the rock. When St. Roque town is open to the eastward of the rocks off Cape Carnero, they may haul in for the Bay, giving the Cape, and the points within, a good berth. Having run up the Bay so far as to open the Devil's Tower, which stands at the N.E. end of Gibraltar, steer for it, and anchor at what depth you prefer, mooring S.E. and N.W.; so as to have an open hawse with a S.W. wind. During war, ships generally anchor off the New Mole.

* Upon the principle here explained, H. M. Mortar-vessel *Hamoaze,* Captain Mac Causland, proceeded through the Strait, on the 11th and 12th of August, 1824, when she beat through with a wind at W. by N. and fresh breezes; being, at the same time, encumbered with a heavy-laden merchant ship under convoy and *in tow.* We have been informed that a similar operation had never before been performed in the Strait, by any of his Majesty's ships or vessels of war.

If

If bound into the Bay, from the eastward, with the wind blowing fresh, you must take care to keep to leeward, out of the *eddy-wind of the Rock,* and stand in to the north part of the Bay to the shore, by the lead, where the soundings will be found regular, as already described. Turn up along shore, taking care, when standing to the southward, to tack so soon as, or before, you come to the flaws from the rock, which are very perceptible. When you have advanced as far to the windward as is desirable, anchor as above.

In sailing out of the Bay, from the anchorage, with a strong easterly wind, set no square sails until you have advanced to leeward of the flaws.

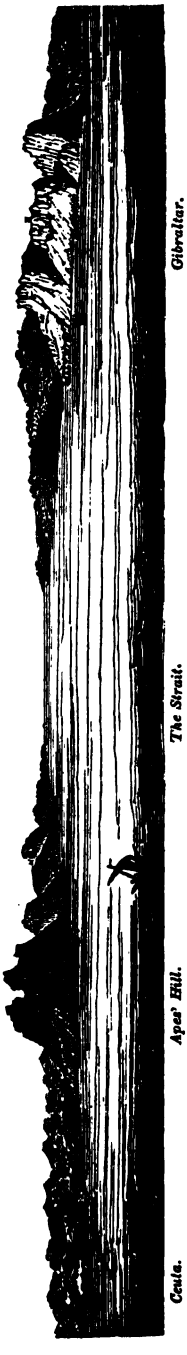
Should you happen, when coming in from the westward, to be carried by the current behind, or to the eastward of, the Rock, good anchorage may be found in 20 fathoms, with Europa and Cabrita Points in one, and the Devil's Tower just open. There are gradual soundings to the Rock, shoaling to 4 fathoms. From the anchoring ground here, you may, by taking the western tide, turn into Gibraltar Bay, observing to stand but a very little way off Europa Point. You may easily perceive the ripple between the current and the tide; and, when you think that you can weather Europa Point, it is not advisable to stand into the Bay, but make a short tack or two in the tide that sets from Europa Point to Cape Carnero; otherwise you may get into the eddy-tide, which will take you on the weather-bow, and deceive you.

When coming down the Mediterranean, in order to run through the Strait, if the weather be clear, the Rock of Gibraltar may be seen at the distance of 40 miles, appearing like an island, higher to the North than to the South. At the same time, Apes' Hill, appearing also like an island, may be seen; so that the Mouth of the Strait will be quite open, and you may enter it boldly. Here it becomes requisite to notice, however, that, as beyond the North end of Gibraltar the land is low, with a flat shore, beyond which, on the North, are several high mountains: this appearance has caused many, in the night, and in hazy weather by day, to mistake this part for the Strait's mouth, by supposing the Rock of Gibraltar to be Apes' Hill, in Barbary, and those mountains to be the Rock: thus have they run on shore. Similar mistakes have been frequently made by mistaking Apes' Hill for Gibraltar, and the low land in Ceuta Bay for the Strait's Mouth: the consequences have, in course, been equally fatal.

In order to prevent such misfortunes, *Tofiño* recommends that all vessels, under similar circumstances, should make the coast of Spain, running down until the Sierra of Estepona (lat. 36° 28′) comes in sight, which will, by its position and bearings, to an attentive mariner, readily point to the situation of Gibraltar.

In advancing from the eastward, toward Gibraltar or Ceuta, you may probably make the *Islet Alboran,* which, when bearing W. by N. 5 miles distant, appears as in the figure on the next page.

The isle lies nearly on the meridian of Adra, in latitude 35° 56′ 30″, or 35° 57′, and longitude 3° 0′ 55″ W. It is about half a mile in length from East to West, and one quarter in breadth. It is of moderate height, and can be seen, in clear weather, at the distance of about four leagues. The south side is nearly perpendicular; the north side less so, and the surface nearly level. At about half a cable's length from the east end is a small islet or rock, and there are breakers all round to nearly the same distance. There is anchoring ground off the East end, in from 25 to 30 fathoms. In the vicinity of the island the current, in general, sets rongly to the eastward.



Appearance of the Strait of Gibraltar, from the Mediterranean Sea.

At

Alboran, W. by N. 5 miles.—(Taken by Lieut. M. A. Slater.)

At a little to the southward of Alboran, and 28 miles more to the east, is a *Bank*, 4 miles in extent from *East* to *West*, *true*, and having over it from 37 to 50 fathoms; its breadth is about two miles. Its place may commonly be ascertained by the ripple of the water.

A *Shoal*, which requires attention, lies in latitude 36° 20½′, at the distance of 25 miles N.E. ¼ N. [*N.* 16° *E.*] from Alboran, and 20¼ miles S.S.W. ¼ W. [*S.* 3° *W.*] from the castle *Guardias Viejas*. This is small, but described as having some dangerous spots on it, and should, therefore, be carefully avoided, especially during a heavy sea.

From the Isle Alboran, Europa Point, on the eastern side of Gibraltar Bay, bears N.W. by W. ¾ W. [*W.* 4° *N.*] 38 leagues, and Ceuta Point W.N.W. ¼ W. [*W.* 2° *S.*] 37 leagues. Allowance must, of course, be made for the current, which sets as above described.

Directions for Sailing from Gibraltar westward, with adverse winds, have been already given. See page 12.

II. *The* COAST *of* SPAIN, *from* GIBRALTAR *to* CAPE CREUX, &c.

GEODETIC POSITIONS.	Latitude N.				Longitude.			
Estepona	36°	25′	15″	..	5°	8′	45″	W.
MALAGA Lighthouse	36	43	22	..	4	24	15	—
Cape Sacratif	36	41	0	..	3	27	37	—
Almeria	36	51	28	..	2	31	33	—
Cape de Gata or de Gat	36	44	0	..	2	13	0	—
Cope Head	37	24	40	..	1	33	2	—
Cape Tinosa	37	31	20	..	1	10	30	—
CARTAGENA	37	35	50	..	1	0	37	—
Cape de Palos	37	36	50	..	0	42	16	—
Cape Cervera	37	59	30	..	0	40	0	—
Cape Santa Pola	38	12	5	..	0	31	20	—
ALICANTE Castle	38	20	8	..	0	29	4	—
Cape de la Nao	38	44	40	..	0	10	33	E.
Cape San Antonio	38	49	50	..	0	8	53	—
Cape Cullera; tower	39	9	0	..	0	11	17	W.
VALENCIA; entrance to	36	26	0	..	0	17	52	—
Columbretes; Monte Colibre	39	53	58	..	0	44	27	E.
Cape Oropeza; tower	40	5	33	..	0	7	48	—
Peniscola; the fortress	40	22	40	..	0	28	8	—
Cape Tortosa	40	43	55	..	0	56	26	—
Coll de Balaguer or Valaguer	40	59	30	..	0	58	40	—
Cape Salou	41	4	30	..	1	10	15	—
Tarragona	41	8	50	..	1	18	53	—
BARCELONA; tower of Montjui	41	22	51	..	2	9	44	—
Cape Tosa	41	42	50	..	1	53	50	—
Palamos	41	51	10	..	3	4	23	—
Cape San Sebastian	41	53	30	..	3	8	8	—
Cape Begu	41	56	38	..	3	9	30	—
Cape de Creux	42	19	35	..	3	15	48	—

STA. BARBARA, &c.—At the distance of 3 miles N.N.E. from the S.E. extremity of Europa Point is the Fort or Castle of St. Barbara, which forms the eastern extremity of the Spanish Lines. At a mile and a quarter, in the same direction, from Fort St. Barbara, is the *Battery of Tunara*; and, at a mile and a half farther is the *Torre Nueva*, or *New Tower*, situate on a rocky point. At 2¼ miles N.E. ¼ E. from the Torre Nueva, is the tower of *Carbonera*, beyond which, 2½ miles, in nearly the same direction, is the mouth of the

the River Guadiaro, which is entered, by coasting vessels, at high water. The rocky and projecting point, named *La Chullera*, is 2¼ miles E.N.E. ½ E. from the mouth of the Guadiaro: this point has a tower on it.

From FORT ST. BARBARA to CHULLERA POINT, the coast is, in general, a low beach; but there are several rocks near it, some of which are above the water. At Chullera Point the coast begins to ascend; and at N.E. ½ N., two miles from it, near the water's edge, stands the castle of Sabinilla. Between is a rock, called Al-corin, about the size of a ship's launch, at the distance of a cable and a half from the shore. The small town, named *Manilva*, stands on a hill, at about half a league inland from Sabinilla Castle. On the coast are several rivulets of fresh water.

At half a league N.E. ¾ E. from Sabinilla Castle, is the tower *del Salto de la Mora*, surrounded with rocks. A large shoal, or sunken rock, lies S. by E. two cables' length from this tower: it is a little above the surface at low water, but is, at high water, entirely covered with breakers. An islet, close to the land, and called *Las Palomas*, lies half a mile N.E. by E. ½ E. from the tower.

ESTEPONA.—The two principal towns between Gibraltar and Malaga are *Estepona* and *Marbella*. Of these, Estepona is the largest and most considerable; the church, with its high spire, is a remarkable object. The town stands close to the shore on the low ground extending southward of the Sierra Bermeia, (pronounced Bermeha,) which is also called the mountain of Estepona.

The Punta dela Doncella, which forms the western side of the little bay of Estepona, is 3½ miles N.E. by E. ¾ E. from Mora Point. The N.E. point of the same is Marmoles Point: between the two, which are a mile apart, is a good road for small vessels in 4 fathoms, and for larger in from 14 to 18 fathoms, with shelter from north-westerly winds, opposite to the town of Estepona, which lies about a mile up from the shore. The direct course and distance to this place, from Europa Point, are N.E. ½ E. [*N.N.E. ½ E.*] 7 leagues. There is said to be a shoal at about 3 miles S. by E. [*S.E. by S.*] from Estepona, which must be carefully avoided.

On the western side of Estepona is the River Monte Roxo, where, even in summer, plenty of fresh water may be had. On the beach, before the town, there is, besides, another watering place.

To the N.W. of Estepona is the high range of mountains, called the SIERRA DE ESTEPONA, or *Bermeia*, already noticed on page 14, and which constitute an excellent mark for all this coast. The TOWER of GUALMAZA stands on a plain, at 4¾ miles E. ¾ N. from Estepona: a sandy point stretches from it to the southward, to the distance of two cables' length.

On any part of the coast hence to Europa Point, vessels may anchor, during West or N.W. winds, at about a mile from shore; or they may lie-to, and by taking advantage of the tide, may ply to windward, until they gain the Bay of Gibraltar.

Nearly E. by S. 2¾ miles from the Tower of Gualmaza, is that of Banos, seated on a sand-hill at a quarter of a mile to the N.W. from a low sandy point of the same name. Between these towers is another, *El Saladillo*, northward of which, 3 miles, is Monte Mayor, a remarkable hill, with a ruined castle upon it.

Summit of the highest mountain between those of Marbella and Estepona.

MARBELLA.—The CASTLE of ST. LUIS and Town of MARBELLA, stand at the distance of 6¼ miles E. ½ N. [*N. 65° E.*] from the tower of Banos. The castle stands at half a cable from the beach, and a ledge stretches about two cables from it to the south-eastward: the rocks nearest the shore appear above water, but those farther out are always covered. From the castle, westwardly, along the beach, is a range of warehouses and stores, from the most westerly of which another ledge of rocks and stones extends about two cables to the S.E., but with good water over it: the anchorage is between the two ledges, in 8 fathoms, bottom of sand.

The town is connected with the north part of the castle, where plenty of fresh water may be easily obtained. Large ships may come to, at a mile from the town, southward, in 18 fathoms, sand.

Marbella

Marbella seems to be only a small town, without any very remarkable buildings, excepting one appearing like a convent; near the town are some patches of plantation, probably sugar-canes, which are represented to be cultivated here; and a large house, with many out-buildings above the town, may be the residence and works of the planter. Marbella stands close to the sea-shore, at the foot of the *Sierra de Marbella*, and immediately South of the Peak of Juana on the same mountain. Off Marbella soundings were taken in 32 fathoms, sticky bottom, about half a league from the shore.

To the N.W. from St. Luis' Castle is the high land called the *Sierra de Marbella*, and more to the eastward is the little *Peak of Juana;* both serve, like the *Sierra de Estepona*, as useful marks for the coast, and as a guidance thence to Gibraltar.

The Tower of Lance de las Cannas, which stands 5¾ miles from the Castle of St. Luis, is thrice the size of the generality of the towers on this coast. It stands close to the beach, which is bordered with rocks. In the interval between are two other towers, and the shore is clean.

The Cove and Point of Burra, in latitude 36° 30′ 50″, are 2¼ leagues to the eastward of the Tower of Lance: a large tower stands, likewise on this point, and there are several smaller between. From Burra Point, at the distance of a mile and three-quarters N.E. ¼ E., is the Castle of *Frangerola*, at the top of a little hill; under which is anchoring ground, in from 7 to 9 fathoms, off a low beach, or farther off, if more agreeable, in 10 and 12 fathoms. Water may be obtained from a river a little to the N.E. of the castle.*

We now approach the elevated and rocky shore to the north-eastward of the Bay of Frangerola, and which terminates the Sierra Mijar and Sierra de Junquera. The *Torre Blanca*, (White Tower,) stands a mile and three-quarters N.E. ½ E. from Frangerola Castle; and eastward, at about 2¼ miles from Torre Blanca, stands *Torre Quebrada*, on a projecting point. Between these towers stands another, *Bella Almadena*, northward of which is the town of the same name. At a mile beyond the tower last mentioned, and at some distance from shore, is a sunken rock, about the size of a ship's hull, with 9 feet over it, and on which several ships have struck.

The Torre Bermeia is a mile and a quarter from that of Bella Almaneda. The rock just described lies about half a mile to the southward of it. At a cable and a half eastward from Torre Bermeia, is the Point of Saltillo, with a ledge of rocks extending about two-thirds of a cable to the S.E. Between this point and that of Torre Quebrada, to half a league seaward, the bottom is of rock, and the water deep.

The Castle and Point of Torre Molinos lie half a league N.E. by E. from Torre Bermeia. The point is low, and lies in lat. 36° 37½′. Here ships may occasionally anchor, on the tract of ground, off the low shore, extending hence to Malaga.

MALAGA, the Malaca of the antients, is now distinguished by a light-house, which exhibits an excellent revolving light: each face shows seven reflectors. When seen from a distance, the light is obscured for three-quarters of a minute, and a very bright light succeeds for 15 seconds; it thus revolves in every minute, or, at least, brightens and obscures in that time. The light may be distinctly seen at the distance of about six leagues.†

From the Point of Molinos, the distance to Malaga is 2½ leagues: nearly midway between is a projection of the coast, apparently formed by the stream of the Rio Gordo, which extends a mile outward. Vessels from the westward for Malaga, should pass the Point of Molinos at the distance of a league, and thence steer so as to keep the town of Malaga on the larboard bow, which will lead them clear of the bank. The lantern on the Mole bearing N.N.E. [*North,*] will lead clear of all danger, or not approaching nearer than 6½ fathoms.

In making Malaga from Point Molinos, with the wind at S.W., so soon as you have cleared the Point of Rio Gordo, you will generally find the wind drawing more and more from the land. Ships of the line ought not to run for the Mole of Malaga when it blows hard from the South or S.W., which would only expose them to danger; but with the wind

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* Frangerola Castle is antient, and has five or six small towers.

† "Malaga is esteemed the second port in Spain, and is celebrated for its excellent wines, the rich *Malaga*, the *Mountain*, so called from the hills which produce the grape, and the *Tent*, or Tinto, so styled from its deep red tinge. Malaga stands in a valley, surrounded with hills, the houses high, the streets narrow and dirty. Inhabitants, about 40,000."—*Townsend.*

strong at S.E. or East, they may bring up, by letting go two anchors, as closely as possible to the Point of the Mole; so that, by veering out only half a cable on each anchor, they will be able to ride it out: but, without that security they must be lost. It is clear, however, that they should not stand for the Mole, unless in a case of emergency: it will be much safer, if possible, to keep out to sea.

Within the Mole, which is on the eastern side, there is water sufficient for ships of the line, but they must lie moored head and stern, parallel to it. In the Road, which is about a mile from the Mole-Head, there is a depth of 8 and 10 fathoms, on muddy ground.

Malaga may be readily known from sea by an old castle, which stands on a hill behind the town, having white walls, which communicate with the town: these walls are distinguishable at a great distance; and, on a nearer approach, you may distinguish the great church, which stands in the middle of the town, near the sea-side.

Captain Livingston has described Malaga, &c. as follows: "MALAGA is a large town, irregularly built; its most remarkable object, on advancing from sea, is the superb cathedral, with a tower or steeple of 110 varas (Spanish yards) in height: this building is coloured yellow, and directly faces the entrance of the port. The next most remarkable object is the Custom-house, which stands nearly true South from the Cathedral; it is a very large building, and looks much like a barrack. Many of the finest buildings in Malaga, including all those on the *Alameda*, a public walk, are built on ground which has been gained from the sea. The Alameda is a very handsome place, (south-westward from the cathedral,) with a row of trees on each side of it, outside of which is a carriage-way, then a low wall, and again a paved carriage-way, with very handsome houses.

To the eastward of Malaga cathedral there rises a hill or mountain, on which stand the remains of the Moorish castle of *Gibralfaro*, once a place of considerable strength, and all the walls being white, it forms one of the town, fully as conspicuous an object as the cathedral does in it; and the steps or road, between walls, leading up to it, appears, from a distance, like a large open stair-case.

On the 19th of September, 1820, at 11 *p. m.* Captain Livingston sounded in 23½ fathoms, when Malaga light bore N.E. (by compass) distant about three-quarters of a mile: and at a little after midnight they anchored, in 18 fathoms, the light bearing N.N.E. nearly a mile.

A shoal has grown up about the mole-head of Malaga, extending S.W. inclining to West; but it crowns or surrounds the whole point to the distance of one-sixteenth of a mile. At the point you have about 14 feet, and immediately ground. The harbour is growing up.* At present there is more water inside than in the entrance of the channel, which has 30 feet, but is narrow. The best anchorage in the Bay, without the harbour, for large vessels, is in 11 fathoms, with the lighthouse and tower of the cathedral in a line."

Those intending to anchor in the Road of Malaga, should come-to, eastward of the meridian of the Mole, advancing with caution, as there is a depth of 10 fathoms very near it. Here you may remain, at single anchor, so as to be ready to get under sail, in case the wind should change to East or S.E., whether to weather Molinos Point, or to run within the Mole.†

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* "It may be useful to inform Captains of vessels connected with the Malaga trade, that the depth of water has materially decreased since the discontinuance of the dredging work, which, till lately, was performed in that port by the Government steam-engine."—*Nautical Mag.* Nov. 1837.

† The following General Directions for Malaga have been communicated by a Captain of the British Navy:—

"The only danger, in proceeding for Malaga, is the low sandy point of the Rio Gordo, between Molinos and Malaga, which runs off very shoal to the distance of a mile and a half; the sea breaks on it in blowing weather; the flood-tide sets directly on it; therefore, with light winds, it would be advisable to anchor, in order to avoid getting on-shore; but, at the distance of 4 or 4½ miles from the Mole-Head, you have no soundings. As you approach the Mole-Head, within a mile, or a mile and a quarter, you will have 20 fathoms, shoaling thence, gradually, to 8 fathoms, which depth you will have within a cable's length of the Mole-Head.

"The tide flows here at XII h., full and change, and rises about 3 feet; the current runs along shore about 8 hours each way. The flood sets to the westward. The best anchorage is in 11 fathoms, the Mole-Head N.E. ½ E. distant about two-thirds of a mile, sandy bottom. All ships, in stormy weather, unless it blows hard from the northward, must go into the Mole, as with any other winds they cannot lie out in the Road with safety."

FROM MALAGA, EASTWARD, to the distance of about 4 miles, the coast is elevated, and has several watch-towers on it, called the *Cantales*: it then falls into a low beach, to beyond the town of Velez Malaga, or old Malaga, which is 4½ leagues to the eastward of Malaga. All along the low shore vessels may anchor, during summer, as the ground is clear. In the eastern part of the beach of Velez Malaga, a river, forming a sand-bank, falls into the sea; it stretches, however, but a short way out, so that there is sufficient depth for vessels to pass within half a mile of the shore.

VELEZ MALAGA.—*The town of Velez Malaga* stands in an elevated situation, at a league inland. In the middle of it are two large steeples; and, on the right, a kind of *castle* on a little eminence, in the middle of a very fine plain, with several gardens in it. Nearly opposite the town, near the sea-side, at the foot of two little mountains, is a small fort, with some fishermen's cottages, against which you may anchor in 8, 9, 10, 12, or 13, fathoms of water. The anchorage is very convenient for all vessels, and sheltered from the wind at West, in 11 fathoms, bottom of sand and chalk; but it will be proper to have a warp out to the S.E., to heave on, should it be requisite to get under sail, with the wind in that quarter.

The preceding description is from *Tofiño*. The following is that of *Captain Livingston*.

This city is situated on the east side of a valley, the first of any importance to the eastward of Malaga, and which has an agreeable and romantic appearance, although the summits of the hills which rise in it, (lower than the mountain range,) appear scorched and almost destitute of vegetation, while the summits of the surrounding mountains, shooting their bare craggy peaks into the clouds, in a thousand fantastic forms, are singularly picturesque, nay even partake of sublimity. The appearance of the city is, likewise, extremely picturesque. Three spires or towers are the most remarkable objects from sea-ward; the one which stands lowest on the slope is of a red colour, (probably built of brick,) the other two are of a dirty white; the highest of all seems to be a tower, square at top, and attached to a church, castle, or convent, on an eminence that commands the town, but insignificant in comparison with the surrounding mountains.

On the east side of Velez is a sweet little valley embosomed in the hills on three sides, but open to the sea, with neat clean-looking villas and groves of orange and lemon-trees, &c. At the entrance of this valley stands the *Torre de Mar*, or Sea-tower, near to which, on the east, is a smaller tower, inclining much to one side, like the hanging tower of Bridgenorth in England.

To the westward of the anchorage of Velez is a singularly stratified mount, the rocks of the strata being whitish coloured, like chalk; and at the west end of the mount a break looks like a chalk-pit, or quarry of white stone, while under the strata, at the east end of the mount, the ground looks like a sand-hill. In front of the mount, that is between it and the sea, stand one or two small houses and a round tower; to the eastward of it stands a very conspicuous white house.

When Velez Malaga bears about N. by E., (by compass,) the low ground in front of it, with thick groves of trees of the richest verdure, the fine appearance of the city itself, the neat looking villas surrounding it, and the high picturesque mountains encircling the whole, form a landscape hardly to be equalled. Two small villages or hamlets stand between Velez and the shore, the easternmost of which seems to have a church. Down the valley, to the westward of Torre de Mar, is the bed of a mountain torrent, at times dry or nearly so.

At N.E. by N. [*N. by E. ¼ E. true,*] the two principal towers or spires of Velez Malaga are in one, and when they bear so, the shore being distant about half a league, the highest tower, as seen through the telescope, appears to be part of the remains of an old fortress, (probably Moorish,) situated on a rocky mount.

The mouth of the river of Velez Malaga, falling from between two mountains, may be distinguished by the low land between the mounts and a grove of high trees, apparently forest, on the banks of the river; while all the other trees, or almost all of them, appear to be fruit trees. The bank of soundings, in sun-shine, may be clearly distinguished, running out from the mouth of the river, as the water on it is quite green. With the mouth of the river, however, bearing about N. by E. ½ E. [*N. ¼ W.*] about a mile distant, we got no bottom with 16 fathoms, though the bank evidently ran about a mile outside us.

TORROS.—At 8 miles E.S.E. ½ E. [*E. 6° N.*] from the point of Velez Malaga, is the point and castle of TORROS. The land between continues low, and there is anchorage west-

westward of the point, in 10 or 11 fathoms, with off-shore winds. Thence to NERJA, a league eastward, the coast is high and precipitous, without beach. The road of Nerja protects all vessels during winds from West and N.W., in 12 fathoms, bottom of sand; but, as it is open to the East and S.E., it is necessary to have an anchor out to the S.E. to heave on, should the wind happen to change. Plenty of water may be had here, but its conveyance is troublesome.

HERRADURA, seven miles to the eastward of the castle of Torros, is a small bay, having a watch-tower on each point. The distance between these points is a mile and two-thirds, and the depth to the bottom of the bay more than a mile. Here is a castle on the beach. Vessels may occasionally stop, but must be ready for a start, in case of an adverse wind; as, in such case, the only resource is to run to the beach at the bottom of the bay, in order to save the crew; the other part of the coast consisting entirely of rocky precipices, which overhang the water. Good water may be had from a well within the castle.

Eastward from the road of Herradura, the coast is high and rocky. A bay, called *Berenguele*s, affords occasional shelter, but it cannot be recommended to a stranger. To the East of this is ALMUNECAR, a small town, before which there is an open roadstead, to be used only in case of necessity, as East and S.E. winds blow very frequently and strongly here, especially in the winter.

A round watch-tower distinguishes Almunecar, and there are several other watch-towers on the coast to the westward. Eastward of Almunecar Point is an islet, with a small fort on it: on the east of this is anchoring ground, 12 fathoms, oaze and sand.

VELILLA.—The TOWER of VELILLA, or BELILLA, stands on a high point, 2¼ miles to the eastward of Almunecar; on its eastern side is a small bay, with anchorage, but there are several rocks about it, off a cultivated valley. This road, like others latterly described, is open to the East and S.E.

WINDS.—INDICATIONS of EAST and S.E. WINDS.—By attention to the weather on this coast, it may commonly be known when these winds are coming on; for when the horizon is overcast in those quarters, with thick whitish clouds, it may be considered as almost certain that the wind is about to blow from those points of the compass; and, as the commencement of the gale, although of short duration, is gentle, there may be time to get under sail before it freshens or draws round to the S.E., and it will be necessary to ride out the gale, which sometimes blows very violently for several successive days.

FROM VELILLA, EASTWARD, the coast is of moderate height, until terminated by the open shore of Salobrenna, a small town, (*the Salambra* of the antients,) to the southward of which is a rocky islet, at the distance of 3¼ miles from Velilla. Between, are two watch-towers on the heights. The beach of Salobrenna is formed by the *River Motril*, the extremity of which forms a projecting point, under which ships may lie sheltered from easterly winds, all along the beach, in from 8 to 16 fathoms, mud, particularly under the Pennon or islet. From this spot, with the wind at west, a vessel may clear the point of the river; and, at the distance of half a mile, find a depth of 18 fathoms. With a S.W. wind, blowing on shore, there is no room to cast a ship; and, in winter, that wind commonly throws in a great sea. At the foot of the islet, on the north side, close to the sea, is a plentiful spring of fresh water.

FROM the RIVER MOTRIL, the coast continues low to CAPE SACRATIF, or the POINT of CARCHUNA, which lies in latitude 36° 41′, longitude 3° 27½′ W., at the distance of 8 miles. In the interval stands the castle of the Barradero of Motril, at above 4 miles from the river, and 2 miles, *S. by E. true*, from the town. Three miles farther is a tower on the beach, with two guns. There is anchoring ground along shore hereabout, but no shelter. The country is pleasant, being covered with gardens and sugar-canes. MOTRIL is a large town, about 2 miles from the sea, in a fine plain: it has several convents and churches, which are seen on sailing along, with some groves to the westward: by the sea-side are several cottages of the fishers, with large trees behind them.

CAPE SACRATIF, or POINT of CARCHUNA.—This headland, which has a round watch-tower on it, is the highest land of all this coast, rugged and steep. On its eastern side is the *Cala dal Chucho*, a small cove, defended by a tower with one gun, beyond which, to the eastward, stands the castle of Carchuna; and, beyond this, on a projecting point of sand, is the tower *de los Llanos*, or of the Plains. The coast hereabout is foul, and there are several rocks near the land. The whole plain hither from Motril is uninhabited.

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The coast again consists of high and rugged precipices to *Point Melonar*, which is a league and a half to the eastward of Cape Sacratif, and has a watch-tower on its summit. Hence, at seven-tenths of a mile E.N.E. ½ E., is the *Castel de Ferro*, on the top of a hill, at the base of which are two spots of low shore, before which is a good road during winds from N.W. to West; but, when it blows hard, they drive, as the ground, from this place, is of loose mud; and, with a S.E. wind, it is impossible to clear the land on either tack. To the east is an open beach, *Cambrilis*, with a tower having one gun. This place is resorted to by vessels coming to load with *sparto*, a species of grass or mat-weed, employed in making cables, &c.; but it presents no advantage as a place of general resort, and may be highly dangerous with an on-shore wind.

RABIDA.—About 9 miles E.S.E. ¾ E. from the Castel de Ferro is the small town and castle of *Rabida*, which are 2½ miles to the eastward of *Punta Negra*. The coast, having several watch-towers on it, continues in a true *East* and West direction, and is, in several places, foul and rocky. At about 5 miles E.S.E. from La Rabida, is the watch-tower of Guarca. The coast still continues high to ADRA, (the antient *Abdera*,) about three miles more to the eastward, where there is a shelter for ships of any burthen, along the beach, in winds from East, by the North, to N.W. Nearest to the town, the depth is from 7 to 8 fathoms, with good holding ground, the castle bearing N.E. by N. at about 2½ cables' length from shore. Water may readily be obtained here.*

FROM the point forming the RIVER of ADRA, the coast eastward is low, and forms a bay, in the bottom of which is the Tower of *Aljamilla*, near which are several rocks. From the Tower of Aljamilla the low coast trends S.S.E. 5½ miles; and, nearly midway between, is the Tower of *Belerma*. Vessels of every description may anchor between this tower and the S.E. point, *El Moro*; but a S.W. wind blows directly on-shore.

On the Moro Point, which is higher than the other part of the coast, stands the Castle of *Guardias Viejas*, and here commence the LLANOS or PLAINS of ALMERIA. The coast hence eastward, to the distance of 2½ leagues, trends nearly E.S.E., [*East*] and a considerable part of it is rocky near the shore; and in some parts are breakers, with the wind on shore, to the distance of two leagues from the land. The greatest projection is near the Moro Point, at the distance of a mile from which are 5½ fathoms, over a rocky bottom. *Point Sentina*, a projection of the beach, at 3½ miles eastward from the Moro Point, has a tower with two guns. The rocks before it extend about half a mile to the southward, and just without them is a depth of 7 fathoms.

The Tower *de las Sentinas* stands in latitude 36° 41′, and longitude 2° 48¾′ W. The *Punta del Sabinal* is rather more than 3½ miles to the eastward of it, and E. by N. from the latter is Punta de Elena; both are low and flat, but between them is a watch-tower, *Los Cerrilos*.

From Point Elena, northerly, 2¾ miles, to the Castle and Round Tower of *Roquitos*, the coast continues low, and affords anchorage for any vessels during S.W., West, and N.W. winds. They may come-to in any spot after passing the parallel of the castle, but the common anchorage is in 16 fathoms, coarse sand, about a mile to the east [*E.N.E.*] from it: they may run in, closer to the land, to 7 or 8 fathoms, but will be there more exposed to southerly and easterly winds, which are mostly prevalent here. The village of *Roquetas* lies above half a mile to the N.W. from the castle, and there is a rocky patch, of 9 fathoms, which bears from the Castle E. by N. [*N.E. by E.*] about six tenths of a mile.

BAY of ALMERIA.—At 2¼ miles N.E. ¼ N. from the Castle of Roquetas is the Tower of *los Bajos* or *Baxos*, having two guns. This tower has its name from some sunken rocks which lie about it, forming a kind of basin, which admits small vessels, and having a depth of 2 fathoms, sandy bottom. Its entrance is toward the south. On the north of the tower of Bajos, the land rises to a considerable height, becomes steep toward the sea, and thus it trends to the eastward to the *Point of Garrofa*, distinguished by a tower, distant from that of Los Bajos about 4 miles E. by N. [*N. 57° E.*] Another tower, *Rambla Honda*, stands at a mile and a half to the N.E. from that of Garrofa, whence the coast trends East 2½ miles, still continuing high to the *Point of Torrejon*, the western extremity of the Road of Almeria, and having a small fort.

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* Up in the country are the mountains of Granada, which commence near Velez-Malaga, and end hereabout. They are always covered with snow and fogs.

ALMERIA, once the most commercial city of Spain, has latterly been reduced to comparative insignificance, and its exports are chiefly barilla and lead. From the town to the river, the shore trends to the S.E. by E. nearly two miles. During an easterly wind, vessels are best protected here by mooring to the S.W. of the bastion of La Trinidad, at the east angle of the city, in from 14 to 9 fathoms, bottom of sand, at about half a mile from shore: the best general station is, however, to the W.S.W. or West [*W.S.W.*] of the same bastion, in from 9 to 8, 6, and 5, fathoms: the latter opposite to the barrack of the guards, where a cable may be made fast on shore.

There is anchorage in the Bay in 14 fathoms, bottom of blue clay, with the church N.E. by E. and Punta del Rios N.E. ½ E. This may be a useful spot during a westerly wind.

Much of the anchorage is strewed with ballast-stones, which have, from time to time, been thrown overboard from vessels resorting to this port. These must be guarded against, as they are injurious to cables. From the fountains in the town, plenty of fresh water may be obtained.

From the sandy flat at the mouth of the river, the coast continues low to the distance of 3½ miles E. ¾ N., and forms the bottom of a bay larger than that of Almeria; but the whole is foul, and affords no anchorage. There are four towers on the beach, the last of which is that of *Garcia*. At about three miles from the latter, S.E. by E. ½ E. [*S. 43° E.*] is that of *S. Miguel*, where ships sometimes bring-to, for shelter from easterly or Levant winds. From this spot to *Cabo de Gata*, or Cape de Gat, vessels may anchor any where, with the cape bearing from S.S.E. to E.S.E., the bottom, all along, being of sand, with 18 to 8 fathoms of water, within three cables' length from shore. The road, however, should be used only in case of necessity, as it is, from its situation, very dangerous during a S.W. or on-shore wind; and vessels here must get under way on the first indication of its changing to that direction.

CAPE DE GAT may be readily known by the *Torre de la Testa*, a watch-tower on its summit. At half a mile from the tower of La Testa, on the east, is the castle of *S. Francis de Panla* or *Corralete*, on a hill, which is perpendicular toward the sea: a lofty islet is close to it, with many steep rocks. Hereabout are many cross currents, which seem to be governed solely by the wind, and which add to the dangers of the coast. Among the latter is a rock of white marble, at half a mile S. 4° E. [*S. 26° E.*] from the castle, with only 9 feet over it. There is a passage between it and the shore, with 6 and 7 fathoms, but it is not safe with a scant wind, unless to those perfectly acquainted with the coast.

From the castle of Corralete, eastward, the coast continues lofty, to a tower on the peak of a hill, *Vela Blanca*, so named from a white spot toward the sea, which may be discerned at a considerable distance. At 3½ miles, eastward, from this tower, is the *Castle of S. Josef*: the coast between is generally high and precipitous, with only one small spot of beach, *Port Genoves*, which is occasionally made use of by small vessels. The castle of S. Josef is seated on a hill of moderate height, and on its eastern side is a cove, affording anchorage in 6 or 7 fathoms, but exposed to flaws and gusts of wind from the high land on the west, and to the winds on the East and S.E.

The *Tower of Cala Figuera*, at about a mile and a half *N. 47° E. true*, from the castle of S. Josef, takes its name from a small creek, which affords occasional shelter from easterly winds. Hence to the north-eastward, about one mile, the coast is high and steep. Here we come to a point, on which are two pyramidal hills, called the *Frayles* or Friars of Cape de Gat, and which constitute the first land seen hereabout on coming in from sea. Beyond this, to the northward, is the Bay of *Mahomet Arraez*, distinguished by the castle of St. Philip.

During West and S.W. winds, vessels may occasionally anchor here: the best spot is off the eastern side of the castle, in 12 fathoms, coarse sand; but the place is quite open to the East, S.E., and South: hence it is resorted to in the summer only.

POLLACRA POINT and TOWER stands at the distance of 5 miles to the north-eastward from the tower of Figuera. An islet close by it appears at a distance like a ship, and on it is a high round hill, *Cerro del Lobo*, surmounted with a tower. The coast now trends to the north, forming several small points and bays.

The castle of *S. Pedro* stands at about 3 miles to the northward from the Lobo tower, on a little bay, or indent, which contains the best anchorage about this coast. On the S.E. of the castle, at the distance of a cable and a half, are 7 fathoms, with sandy bottom, where

where a vessel may ride safely with the wind at S.W., West and N.W., North, and East: for, although it is open to the S.E., it has been found that the stronger the wind blows from that quarter, or from east, without the bay, the more does it blow off shore within, so that the only inconvenience is a little swell of the sea from without. The breadth of this cove is but half a mile, and the depth is less, so that it can hold but a small number of vessels. The shore is hilly and steep, with only one spot of beach under the castle, which stands so high as to command the road. Vessels lie with a cable on shore to the N.E., and an anchor out to the S.W. There is a spring of good water near the castle, but it cannot be conveyed, without some trouble, down to the beach.

La Mesa de Roldan, a high promontory of table-land, on the plain summit of which is a tower, stands at the distance of 3 miles to the north-eastward of the east point of S. Pedro. There is a small cove within it, on the west, wherein coasters sometimes find shelter from easterly winds, but it is open both to the S.E. and S.W.

From the Mesa Point the coast trends *N. 6° E. true*, about 3 miles, with an open beach along shore. Here stand the castle, village, and islet, of Carbonera, commanding a road well defended from the West and S.W. Vessels may anchor in any part of it, on a clean sandy bottom; but the most usual place is in 24 fathoms, at about a mile to the southward from the castle, or from the islet. But it is to be noted that, with a S.E. wind, there is no room for vessels to cast off here, in getting under way, so that they must ride it out.

The Islet of Carbonera lies nearly half a mile to the south-eastward from the castle: the channel between is narrow, and has not, in some places, a greater depth than 2 fathoms.

MOXACA.—On the elevated land, at half a league to the northward of Carbonera, is a watch-tower, called *Torre del Rayo*. From the *River Dalias*, a brook to the northward of this tower, if weather permits, a supply of water may be obtained, The next tower, northward of this brook, stands on a large rock, and is thence called *Torre del Pennon*. Another, 2 miles more to the N.E., is called *Masenos*. Here the coast again becomes low and sandy to the *Punta del Cantel*; 2½ miles beyond which, to the northward, is the town of Moxacar, situated on the top of a hill, one mile up from the shore: behind this are the high ridges of *Cabrera*, the highest of this part of Spain, which may be seen from Cartagena, or about 18 leagues off.

From Moxacar, in latitude 37° 6′, the coast continues low, for 2½ miles, to the castle of *La Garrucha*, on the beach of the town of Vera, which stands *N.W. by N. true*, 3 miles from the castle and nearly as much from the nearest shore. No particular anchoring ground can be recommended here. As the coast forms a bight in this part, the currents so run, at times, in contrary directions, as to form a whirlpool or race, an approach to which may be embarrassing, if not dangerous.

RIO DE CUEBAS.—A small river, the *Rio de Cuebas*, falls into the sea in lat. 37° 12′. Here the land again becomes high, and so continues to the north-eastward 4½ leagues, or rather more. On the north side of the Cuebas is the tower of *Villaricos*. Here foreign vessels from Cartagena frequently take in barilla, riding at anchor in all winds excepting from the east. Northward of Villaricos commence a chain of mountains, the *Sierra de Villaricos*, which, although not very lofty, present a number of peaks, and extend to the point of the same name, a distance of 5½ miles. The coast continues high, and nearly in the same direction, with a few projecting points 5½ miles farther, and to the castle of *S. Juan de los Ferreros*. The latter is seated on a hill of moderate height, and steep toward the sea; there is a little cove on the west side of it, which is resorted to for barilla, &c.

From the Castle of S. Juan, to the N.E., the coast is of moderate height, but irregular, to the distance of 4½ miles. Here we arrive at the castle and Port of Aguilas, in which frigates and smaller vessels may be sheltered from S.W. and West winds, in 5½ fathoms of water, but the bottom in some spots is foul. At about 5 miles E. ¼ S. [*N. 72° E.*] from Aguilas Castle, is the elevated promontory called *la Cabezo de Cope*, in lat. 37° 24½′, long. 1° 33′ W. This headland extends above a mile to the north-eastward; it is precipitous and steep-to, but forms two anchorages, of which that on the west, *Cala de la Bardina*, will shelter many ships during an easterly wind; within two cables' length of the beach are 8 fathoms, bottom of sand. Within a cable's length of the north side of the hill are 13 fathoms, sea-weed, with some spots of sand, and some loose stones.

The

The Almadrava or Tunny fishery, is prosecuted annually in this bay; and there are shell-fish, frequently adhering to the stones, which sometimes injure cables. The south is here an on-shore wind, but it seldom blows, excepting in the winter season.

The anchorage on the N.E. side of the Cabezo or Head of Cope, is sheltered by the land from S.W. and Westerly winds. It has a good depth of water, with bottom of sand and sea-weed. Should a storm be coming on, if not from the N.E. or S.E. quarters, a vessel may take refuge here, but must bring-to according to circumstances. The coast hereabout is uninhabited, excepting the tower of Cope, which has two guns.

Rather more than a league to the N.E. from Cope Head is the *Cala Blanca*, a little cove, which admits small vessels. The coast thence trends more to the eastward, about 3½ miles, to the rocky point *Calnegra*, which has a flat beach on each side, exposed to the S.E. The shore hence is of moderate height, to the distance of 5½ miles, where a point stretches into the sea, and forms a broad black head, with white spots on it, named *Cueba del Lobo*. Beyond this to the east, an open beach forms a bight, more than 3 miles broad, to the tower of Almazarron, where another and more extensive bay commences.

ALMAZARRON.—The eastern part of *Almazarron Bay* is hilly, and on its point is a tower, *La Subida*, which gives name to that part of the road. Here is excellent shelter from an Easterly and even a S.E. wind, to the northward of the tower, in 7½ fathoms, bottom of sand, distant about one-quarter of a mile. This is a convenient spot for vessels, which, having left Cartagena, are overtaken by an easterly wind. The bottom is clean; so that half the road, at least, may be used by ships under such circumstances. The winds from West, S.W., and South, to which the bay is open, are easy in the summer, but in winter dangerous, as they prevent vessels from casting off and getting under way.

The western part of Almazarron Bay is convenient, as an anchorage, during winds from West to South; but those from East to S.E. send in a heavy swell. The most convenient situation for large vessels is on the N.E. side of the tower, upon the west head of the bay, at the distance of about a cable's length, where a cable is made fast on shore to the rocks, with an anchor out to the eastward. Here is a depth of 7½ fathoms. At about half a mile N.E. ½ E. from the tower, is a patch of rocky ground, having 9 fathoms over it, but dangerous to cables; and there are two rocks above water, with foul ground about them, within the bay. The village of Almazarron stands at about a league inland, to the north-westward.

CAPE TINNOSA.—From the Cape of La Subida to Cape Tinnosa, which is high and precipitous, the coast trends East, about 2½ miles. This cape lies in latitude 37° 31′, and bears from Cope Head East [*N.* 69½° *E.*] 19½ miles. Beyond Cape Tinnosa the land takes a northerly direction, 3½ miles; the greater part hilly and steep, until terminated by the small and low beach of *Portus*, to the N.E. at 3½ miles from the cape. From Portus, on a true East direction, the distance to the entrance of Cartagena Harbour is 5½ miles. The coast between is high.

Not far to the eastward of Portus is the commencement of a hill, the *Cabezo de Roldan*, which is descried from a greater distance than any other part of this coast. At the foot of this hill, and one-quarter of a mile from shore, is an islet, *Las Palomas*, surrounded by foul ground. At 3½ miles eastward from Portus is another small island, *Torrosa*, very near to the shore, and two miles to eastward of which is the western point of the Harbour of Cartagena.

CARTAGENA.—The western point of the Port of Cartagena, *La Podadera*, is of moderate height, and has a fort on its summit. Close to the land, which is very steep, is a depth of 7½ fathoms. About one-third of a mile to the north-eastward of Podadera Point is the point and fort *Navidad*; and opposite to this, on the eastern side of the harbour, is the point and battery of Sta. Florentina. This is the narrowest part of the harbour, which is here little more than one-third of a mile broad.

Within Fort Navidad, and toward the north, is the *Grand Espalmador*, or Great Careenage, forming a small bay of 550 yards over, and having a depth of 5½ to 4½ fathoms: it is the common anchoring-place for all ships of war. Off this place, at a quarter of a mile to the eastward, is the Harbour Shoal, *La Laxa*, a small reef, over which the depth is only two feet, and steep-to all round. With a wind blowing fresh inward, the sea breaks over it.

In

In the N.W. corner of the harbour is the Royal Arsenal, to the east of which is the City of Cartagena. The suburb of Santa Lucia extends down the eastern side, which forms a small bay, having, on its south point, a powder-magazine, whence the shore becomes hilly to the battery of Sta. Florentina, already noticed. The harbour is one of the best in Spain, being a natural basin, surrounded by hills. The arsenal is spacious, and protected by forty guns toward the water. The population is estimated at about 30,000. The principal exports are wool and barilla.

When a ship bound to Cartagena is off Cape Tinnosa, with a westerly wind, she should run along shore at a good distance, or about half a league, until she arrives at the Point of Podadera, and thence run northerly, along the western shore, at the distance of half a musket-shot, whence she may come to anchor in the Careenage already described.

From off Cape Palos, with a westerly wind, a ship for Cartagena must beat up to windward until the middle of the harbour bears due *North, true:* thence she may run up within half a musket-shot of Fort Podadera, and along the western shore to the Careenage or anchorage.

CURRENTS, &c.—Off Cape Palos there is commonly a current setting to the south-eastward, with some degree of force; and most so farther out. The coast between this and Cartagena is so far clean, that vessels may approach it within half a mile: but, it is to be observed that, near Cape Tinnosa, the current frequently sets into the Bay of La Subida, on the west; and the probable effect is to be obviated only by requisite precaution.

Winds from the S.W. quarter, here called *Birazones*, are, during the summer, very regular in the Port of Cartagena, from 10 *a.m.* until sunset: and, in winter, they blow throughout the night. To sail out of the harbour, it is necessary to weigh in the morning, with land-breezes, which, in moderate weather, generally last till 8 or 9 o'clock.

ESCOMBRERA BAY, the large inlet on the eastern side of the entrance of Cartagena Harbour, is sufficiently extensive to shelter several large squadrons, during winds from the N.E., S.E., and N.W.: the bottom being generally clean, and the depths from 15 and 14 fathoms, in the middle of the bay, to 6 and 5 fathoms near the shore, sandy ground, with some patches of sea-weed. The most frequented anchorage is in 7 fathoms, under the south shore, opposite to some fishers' huts. The little island Escombrera, at the entrance, is hilly, and has a watch-tower on its summit.

PORMAN.—From Escombrera, eastward, to Cape del Agua, a league distant, the coast is high. The cape is steep, and its summit is formed into three little peaks: at 4 miles from it, E. ½ N., is the little port of PORMAN, having, in the middle, a depth of 7 and 8 fathoms, bottom of sand, over which vessels of all descriptions may, during the summer, lie in safety. The best anchorage is rather nearer to the western than to the eastern shore; the harbour being open to southerly winds only. That from the S.W. brings in the heaviest sea. The country around the bay is uninhabited, but on the summit of the east point is a tower, with three guns; and near the same point is a rock, even with the surface of the water, at about a cable's length from it to the westward. Fresh water may be procured in the north part of the bay, near the middle, at a spring about one-third of a mile from the beach.

Eastward from Porman, the coast continues high to CAPE NEGRETE, more than a mile distant. From the cape, which is elevated and black, the land falls irregularly toward Cape Palos, but between are the two pointed mountains *Los Juncos*.

CAPE PALOS.—This cape is not elevated, but has a square watch-tower on it, with three guns, with a small house near it. Westward of the cape the shore is foul and rocky, to the distance of 3½ miles; but on the north side is an extensive plain, with a small roadstead, protected from south winds by the cape, but open to the East and N.E. The greater *Hormiga*, a flat islet, lies E. by N. more than 2 miles from the tower on the cape, and a little from it to the south-westward, is the *Lesser Hormiga*, a bare rock. In the interval between are several rocks; but any ship may pass through the channel between Little Hormiga and the cape, in from 8 to 5 fathoms. But the wind should be fair, and they should keep rather over to the cape, because a shoal lies at the distance of half a mile W.S.W. from the Hormiga. There is also at the same distance, E.N.E. ½ E. from the Great Hormiga, a similar shoal: this lies with the Hormigas in a line, and Cape Palos tower on the south side of the hill called the Greater Junco. It may be known by its white colour.

The narrow slip of land, which extends about two leagues to the north, above Cape

Palos, is called LA MANGA. It forms the MAR MENOR, or LITTLE SEA, which contains several elevated islands. Those in want of fresh water may obtain it, in all seasons, by sinking *casimbas*, or pits, in the ground, on La Manga.

The ISLA GROSA, which lies 6¾ miles to the northward of Cape Palos, is high, and about 640 yards in length. Its appearance is somewhat like a haycock, and its distance from La Manga, or the shore, is a mile and a quarter; between is a roadstead, protected from easterly or Levant winds. Vessels anchor at the distance of half a cable from the isle, in 4½ fathoms, sea-weed; but the place is adapted to xebecs and small vessels only. At E. by N. 320 fathoms from the isle, is a small *farallon*, between which and the isle is a depth of 7½ fathoms; but, at 575 fathoms, E.N.E. from the island, is a rock, having over it only one fathom of water.

At a mile and a quarter N.N.W. from the Isla Grosa is the Tower del Estacio, on a low rocky point, projecting from the Manga, and which forms a small bight, having from 2½ to 3 fathoms. From the point, a reef of rocks extends to the south-eastward, to the distance of 3½ cables.

At about 2½ miles to the northward, from the Tower of Estacio, is the mouth of the *Mar Menor*, already noticed, which is protected by a tower, having two guns. The water is very shallow, so that none but fishing-boats can enter. From the tower, *de la Encarnizada*, to the next, on the north, *Herradura*, the distance is 4½ miles, and here the high coast again commences.

CAPE ROCH, with its tower, stand at the distance of 3½ miles N.E. by E. from the tower of Herradura. The land, which is rather higher than that of Herradura, may be readily known by its reddish colour. The *Torre Vieja* is 5 miles N.E. by E. ¾ E. from Cape S. Roch, and the greater part of the coast between forms a sandy bay, resorted to by vessels for salt, which is manufactured here; but the water is so shallow, that they lie at the distance of half a mile from shore, where the depth is 3½ fathoms, bottom covered with sea-weed.

CAPE CERVERA.—From Punta de Piedras, or the point of the Torre Vieja, to Cape Cervera, one mile in distance, the coast is of moderate height. The latter has a round tower on it, with two guns. Above Cape Cervera the coast is again low and open: at a mile and a quarter northward from it is the strong tower and houses of MATA; there are salt-works on the beach, and vessels come here for salt, but the road is confined as well as exposed, being entirely open to easterly winds.

At 5½ miles to the northward from Cape Cervera, is a little town GUARDA-MAR, which is situated on the beach, at the foot of a small hill, surmounted by a fortification. Near this, on the north, the River Segura falls into the sea. The ground is shoal, but there is no proper anchorage.*

The CASTLE of STA. POLA, a square structure, situate in a plain on the sea-side, stands at about 7 miles N.E. by E. from Guarda-mar. Close to it on the west, is the little town *Lugar-nuevo* (New Town); and, at a league to the eastward, is the extremity of the Cape of Santa Pola, distinguished by the Tower of Talayola.

The ROAD of LUGAR-NUEVO, a very useful one, comprehends all the space between the town of Guarda-mar and Cape Santa Pola: the ground is good, all along, in from 9 to 4 fathoms; the bottom of sea-weed in 4 and 5, and sand, outward, to 9 fathoms, which holds well. With the wind from seaward no apprehension need to be entertained; but with a wind off shore the requisite precautions should be taken, that the vessel may not be driven from the slope of the bank into deep water. The usual anchorage is in 4 or 4½ fathoms with the castle of Sta. Pola, N.E. by E., distant about one mile. Vessels should moor N.W. and S.E., with the longest cable in the latter direction: men of war farther off, in 8 or 9 fathoms.

From this road will be seen, to the *W. by S. true*, the *Sierra Cayosa*, a ridge of moun-

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* The description in the text is from *Tofino*; but here it was to be noticed, that *La Mata* was materially injured by the dreadful earthquake of March, 1829. This awful calamity totally annihilated several villages, and partially ruined many others. Those on the coast which suffered were *Torre-vieja* and *Guarda-mar*, and these *were entirely ruined*. The River Segura, which flowed through the city of Murcia, changed its course and its mouth; and four craters, at the place where Torre-vieja had stood, poured forth torrents of fetid water.

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tains, four leagues up the country, which are of moderate height, appearing dark and detached from other high land.

Cape Santa Pola, when viewed from the southward, appears, at first, like a flat point, even with the water; then gradually sloping up to a moderate height, and again rising more rapidly to the summit. The ground declines evenly, and of a reddish colour, to the neighbourhood of Lugar-nuevo. From the northward the cape presents a similar appearance; but, from the eastward the high land is plainly seen, although the lower parts seem blended with those behind them.

The latitude of the middle point of the cape is 38° 12′ 5″: its longitude 0° 31′ 20″ W. Its outer part is surrounded with a sand-bank, extending to the distance of a cable's length, with 13 or 14 feet of water on it.

The ISLA PLANA or TABARCA, (pr. *Tavarca*) which is rather more than a mile in length, from east to west, lies at the distance of 2 miles to the S.S.E. of Cape Sta. Pola. On its western part stands the Castle of S. Pablo, (St. Paul) in latitude 38° 10′. The isle is altogether low and flat: at a short distance from the south part are some *Cabezos*, or heads of rocks, above water; and at the distance of a cable and a half from the outer or eastern point is the islet called *La Piedra de Fuera*, the outer rock, otherwise *La Nave*, the ship. There is a ledge, partly above water, between it and the island, and another extending easterly, entirely covered, to two cables' length: still farther out, in the same direction, at a mile *E.* 15° *S. true*, from the Piedra de Fuera, is a rocky shoal of 2¼ fathoms.*

From the existence of the shoals above described, and which have, heretofore, been very erroneously represented, it has been recommended to vessels, under favourable circumstances, to pass through the channel between Cape Sta. Pola and the island, rather than to the eastward of the latter; minding only to keep in mid-channel, the shoalest part of which has a depth of more than 6 fathoms, shoaling gradually on each side. The bottom may be seen all the way through. With a large ship, it is, however, improper to attempt this passage, as there is, frequently, an adverse sea, and it is not easy, by the eye alone, to follow the middle of the channel.†

From the TOWER and CAPE of ALGIBE, which stand at a distance of 2½ miles to the northward from Cape Sta. Pola, the coast toward Alicante is low, with a flat open shore. At half a league from Cape Algibe is the tower of Calabazina; and, at a league and a half, that of Aguamarga, which is only 2 miles to the S.W. from the pier of Alicante.

ALICANTE.—The castle of Alicante stands in latitude 38° 20′ 8″, and longitude 0° 29′ 4″ W. The town, which has been rated as the fourth commercial city of Spain, contains about 18,000 inhabitants. It is situated at the foot of a hill, on the summit of which stands the castle, commanding the town and communication with it by a passage between two walls. The pier admits small craft only: large vessels generally anchor without, in about 7 fathoms. The exports are soap, wine, wool, fruit, salt, barilla, kermes, aniseed, antimony, alum, vermilion, &c.

The BAY of ALICANTE, properly speaking, is formed by Cape Sta. Pola and Cape de la Huerta. The former has been already described: the latter bears from it N.E. ½ E. nearly 10 miles, and is distinguished by the tower of *Alcora*: a reef of rocks extends from it, to the eastward, about one-quarter of a mile. At the edge of the sea, Cape de la Huerta is a low flat point; but, at half a cable's length within, the ground rises in a whitish rock, or stone, on which is the tower; the surface above, uneven and broken, extends to a small peak, *Picacho de las Matas*, which is a useful mark for the coast.

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* "The passage between the *Isla Plana* and the main should not be attempted by a line of battle ship, unless with a fair wind and smooth water, as there is not more than a quarter-less 5 for some distance, when directly between the *Tower of Escaleta*, on Cape Pola, and the nearest part of Plana Island." (*Mr. Wilford, Master of H.M.S. Pylades.*)

Capt. Livingston has passed several times between the island and the main, both in going to and coming from Alicante. He got nearly in mid-channel, in 10 fathoms, and stood S.W. by W. until nearly between the island and Cape Santa Pola, and then W.S.W. nearly Cape Cevera, carrying regular soundings until they shoaled to 5 fathoms, which continued for nearly a quarter of a mile; then deepened to 8 fathoms, still with irregular soundings, until the innermost point of the island and the town of Escaleta were brought two points abaft the beam.

† The tower on Cape de la Huerta in a line with the highest peak of Monte del Hombre, bearing N.N.E., leads clear of the outer shoal on the east.

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The usual anchorage off Alicante is entirely exposed to the winds from E.N.E. to S. by W.: but, as the ground is good, sea-weed and sand, when there is no heavy sea, ships ride tolerably well with all winds, but best with those from the N.W. and N.E., from which they are protected by the mountains. They should moor N.E. and S.W. with the small bower to the S.W., at about a mile from the land, in from 11 to 5½ fathoms: some may advance to 3 or 2 fathoms, to the southward of the castle of Sta. Barbara, which crowns the top of a rising ground.

From CAPE DE LA HUERTA to the Point of BENIDORME, the bearing and distance are E.N.E. ¼ E. [*N.* 55° *E.*] 6½ leagues. Of this extent the greatest part is destitute of anchorage. Three towers distinguish the rocky coast; the first, at 4½ miles from the cape, called *La Isleta;* the second, at 7½ miles, *del Agua;* the third, at 10½ miles, *del Charco.* The village named VILLAJOYOSA is 14 miles from Cape de la Huerta: here small vessels may lie, on good ground, protected from north-westerly and north-easterly winds.

Three miles to the eastward, from Villajoyosa, is the tower of *Guibou*, on a low point, which falls thence to a sandy shore. Two miles farther is the town of BENIDORME, close to the sea, on a rock of moderate height. At the distance of 2 miles S. by W. ¼ W. [*S.* 2° *E.*] from Benidorme, is an islet of the same name, which is only 455 fathoms over, from N.E. to S.W. It is hilly, uninhabited, and so steep that vessels may pass within less than half a mile of it, in 11 fathoms. The greatest depth, in the mid-channel, between the island and main, is rather more than 20 fathoms. It is, however, to be noticed, that, at about a cable's length from the south side of the island, is a rock, surrounded by a bank of a whitish colour, not far from which is a depth of 14 fathoms.

Vessels of every description may anchor in the BAY of BENIDORME, protected from winds from the East, by the North, to West, but exposed to all others. The eastern point, having on it the tower of *Escaleta*, is rather high, and may be approached with safety. The best anchorage is to the south of the town, in 14 or 15 fathoms, at the distance of two cables, or rather more, from the extremity of the rock on which stands the fortress of Benidorme. Here, should the wind change to the S.W., it will be easy to get under sail, and stand out so as to clear the eastern point. Small vessels generally anchor on the west side, close under the cliff or town, with one cable on shore, and an anchor to the S.W. Fresh water may be readily obtained in several places.

The SOUTH WIND is more prevalent here than in any other road of the coast, and is therefore dangerous to vessels, especially in the autumn and winter, as it sends in a great swell.

From the Point of Benidorme, or Escaleta, 2½ miles to the N.E., the coast is high: within this extent is an islet, close to the land. Upon the north point of this high land is the tower of *La Bombarda*, with one gun.

BAY of ALTEA.—This bay, which lies immediately to the northward of the tower last mentioned, is more than 2 miles in extent, north and south, and vessels of all sizes may lie here sheltered from winds between North, by the West, to S.W., over a bottom of sand and mud. The best place is, with the town, which stands on an eminence, bearing N.N.W. in 12 fathoms, at three-quarters of a mile from shore; because, from this spot, a vessel may clear the south point, should the wind get round to the east. To the distance of a cable and a half from shore, all along the bay, the ground is of rock; farther out, sand and mud. Plenty of good water may be had on the beach.

Two leagues to the *west*, from the town of Altea, is a high hill, having, on its western summit, a deep gap, which is very visible on the southern side: this is called, by the seamen, *La Cuchillada de Roldan* (the Cut or Gash of Roldan). This mountain, from its superior elevation, is the first that is seen hereabout on coming in from sea.

A small river terminates the Bay of Altea, and the coast hence continues low one mile and a quarter to the N.E., where stands a tower, with two guns, on a point called *Cape Negrete*, whence the land becomes higher, and forms a shelter for small vessels; but the ground is foul: there are two islets, the farthest of which from shore lies more than half a mile from the tower to the East [*E.N.E.*].

From Cape Negrete the shore forms a bight of rugged and foul ground, which includes two towers, *La Galera* and *Mascarat*.

The PENNON (or Great Rock) of CALPE, called, in the country, the *Mountain of Ifak*, is the termination of a high rocky ridge, forming the western boundary of the BAY of

of CALPE, distinguished by a town of that name. The anchorage here is, in some degree, sheltered by the hill from easterly winds, but it can be used only in the summer-season. Vessels occasionally anchor on the east side of the hill; but near the shore, in this road, is a reef of sunken rocks; hence it cannot, in any way, be recommended to a stranger.

MOREYRA.—BETWEEN the PENNON of CALPE and CAPE BLANCO, in an extent of one league, the coast is variegated and uninhabited: the land moderately high. Eastward of Cape Blanco, at the distance of half a league, are the CAPE and TOWER of MOREYRA; the space between is called the BAY of MOREYRA, or ALMOREYRA, in which ships may ride safely during all winds from West, by the North, to East; the best station being with the fort in the middle of the bay, bearing N.E., at the distance of about 3 cables, in 9 fathoms, sand and weeds: the greater part of the coast is stony and rocky. By making a cable fast on shore to the eastward, with an anchor to the west, a vessel will be defended from the swell, and ready to get under way.

BEYOND CAPE MOREYRA the coast on the N.E. is high and precipitous to *Cape de la Nao*, a distance of more than 5 miles. Close to the latter is a small islet. At the distance of about a mile and a half within the cape, on a short extent of beach, is a small fort, *La Granadilla*, with two guns.

CAPE DE LA NAO is situate in lat. 38° 44′ 40″, and long. 0° 10′ 33″ East. The coast hence to CAPE ST. MARTIN, 2¼ miles, is hilly. On the south side of the latter is an islet of moderate height, close to the land, but foul and rocky, excepting on the eastern side, where the water is deep; as it likewise is about the Cape.

CAPE St. ANTONIO is two miles to the northward of Cape St. Martin; it is high, level, and perpendicular toward the sea, with a monastery on it, and some wind-mills on its summit. These capes form the BAY of XAVIA, on the rising land of which, above the beach, is the little town of that name. This roadstead protects vessels from winds at South, S.W., West, and N.W. The anchorage is in the northern part of the bay, under the tower of St. George, for this is the only spot of clear ground. Vessels bound to the northward, with an adverse westerly wind, may come-to in 12 fathoms, sand, with the tower bearing N.W. [*W.N.W.*] nearly a mile off. Here the tower and chapel on Cape St. Antonio will bear North [*N.N.W.*].

A REMARKABLE CHANGE of WIND is frequently found to take place near Cape St. Antonio; and vessels coming from the westward, with a wind in the same quarter, find, when they reach the Cape, another from the North or N.E., and blowing fresh. Under these circumstances, those who are not disposed to stand out to sea come to anchor in the Bay of Xavia, awaiting the land-breeze of the morning, when they double the cape to the northward.

CAPE ST. ANTONIO, WESTWARD, TO GIBRALTAR.—Westerly winds on the coast of Spain, between this part of the coast and Gibraltar, frequently vary 4, 5, or 6, points, in the course of 24 hours; and that *regularly* during the summer, and often in the winter. It is important that this should be known, in particular to all those who are bound to the westward. The wind, if blowing nearly in the direction of the shore, will veer a point or two more toward it during the day, and at night as much from off it; and, if the weather be moderate, frequently much more. In order to take the best advantage of these changes, it will be necessary to be close in with the shore at sun-set, or a little before, where short tacks should be made, until the wind draws off the land, with which you may stand off until 7, 8, or 9, o'clock in the morning, according to circumstances; at which time the wind will be veering to seaward, when they should tack and stand in again. This is more particularly necessary when so low down as Cape de Gat, as there the effects of the eastern current will be felt, and most at a distance from the land. To the westward of Malaga, short tacks will keep a vessel entirely out of the current; and, on approaching Gibraltar, she may either anchor at the back of the rock, or work into the bay, according to the directions already given on page 14.

From Cape St. Antonio the coast trends to the north-westward, and continues high for 2¾ miles, where it terminates in a low point, *Punta Sardo*. Between is the tower of *Aqua-dulce*.

BETWEEN PUNTA SARDO and CAPE CULLERA the coast is a low beach. At 2¼ miles N.W. by N. from Point Sardo, is the little harbour of DENIA, which is formed by two shallow banks; over which is the town of that name, having an old castle in the middle

middle of it. The banks extend outward to the distance of a mile. In the channel or harbour toward the town, are from 9 to 5¼ feet only. The land on which the town is situate is of moderate height, and, at a distance, appears like an island; the land on each side of it being low. Vessels may anchor off the town, without the harbour, in 6 or 7 fathoms, on sandy ground.

At three miles to the north-westward of Denia is the tower of *Almadrava*; thence to the little town of *Oliva*, the distance is 6½ miles: the latter stands at the distance of one mile and a quarter from the sea. At about 4 miles farther to the north-west, and one mile and three-quarters from the sea, is the town of GANDIA, on the left or northern bank of a small river. The coast hereabout is rocky as well as low, and affords no shelter from easterly winds. On the shore, between Oliva and Gandia, stands the round tower of *Pilas*.

At 2¾ miles to the northward of Gandia River is a tower, with one gun, called *Xarac*, or *Sarrac*; nearly 2 miles to the northward of which is another, *La Ball*: and, at about the same distance to the northward of the latter, is the entrance of the *River Zucar* or *Jucar*. The bar of this river admits only small barks, which lade with rice, an article of considerable export here. At the mouth of the river, on the south side, is a tower with several guns; and, on the north bank, at a little more than half a mile from the entrance, stands the town CULLERA, at the base of a range of hills which terminate in the cape of that name. A little to the north of the mouth of the river, near the shore, with the town bearing W. by S., is a rock under water.

CAPE CULLERA.—Near this cape is an islet, which seems to promise shelter for small vessels; but the ground around it is shoal and interspersed with rocks. Above the Cape, to the northward, the land is again a sandy flat; and it thus continues, forming the Bay of Valencia, to the neighbourhood of Cape Oropesa, which is situate in lat. 40° 5′ 38″ and long. 0° 7′ 48″ East. At 5½ miles to the northward, from Cape Cullera, is the tower named *Casa del Rey*; and, at an equal distance farther to the north is another, the *Torre Nueva*: behind these, on the west, is the *Albufera* or Great Lake of Valencia, which is separated from the sea by a long narrow slip of low sandy land.

VALENCIA.—The GRAO, or town on the Strand of Valencia, lies at the distance of 18 miles N. ¼ E. [*N.* 17° *W.*] from Cape Cullera. The sea hereabout is shoal, and it is highly dangerous for a vessel to be caught here during an easterly wind, as it will be next to impossible to get out to sea; and much of the bottom is of rock.

In front of the Grao is a semi-circular mole, the extremities of which are about half a mile asunder. It is entirely open to the S.E. The depths between the mole-heads are from 12 to 10 feet, whence it shoalens to the beach.

On the N.E. end of the mole is a *fixed light*, in form of a semi-circle, with its concave side toward the sea; the reflector is circular, composed of mirrors, which reflect the light of nine lamps, producing a brilliant light, about one foot in diameter. The lantern is four feet in height, and placed on the top of a quadrangular wooden pyramid of 22 feet, standing on the extremity of the highest pile of rocks forming the point of the mole. Thus the light is elevated 37 feet above the level of the sea, and may be seen, in clear weather, 12 miles off.

The CITY of VALENCIA stands at the distance of a league to the westward of the Grao, on the right or southern bank of the River Guadalaviar. This city is surnamed the handsome, but very undeservedly, its streets being narrow and crooked, the houses ill-built and dirty. Its population is computed at more than 100,000. From the Grao are exported the productions of which Valencia is the depôt, and nearly the same as the exports from Alicante.

From the Grao of Valencia to that of Murviedro, the bearing and distance are nearly N.E. [*N.* 22° 15′ *E.*] 11 miles: there is no habitation between but the tower of *Pucha*, which is 2 leagues from the River of Valencia. On the Grao, or Strand, of Murviedro, are a tower with two guns, and several warehouses. The road here is unsafe, although not so rocky as that of Valencia.

The town of MURVIEDRO stands on the southern bank of the River Palancio, at 3 miles from the sea, on elevated ground. It is small, the inhabitants being about 6,000 only. The streets are narrow and dark, but the suburbs well built. The citadel, under the name of *Sagunta*, occupies the entire summit of a high rock.

From

From the GRAO of Murviedro, the coast extends 4 miles N.E. by E. to a low flat point, *Cape Canet*, having a fortified tower: thence to the northward are other towers along the shore, but no place of shelter or proper anchorage.

At 11 miles to the south-eastward of Cape Oropesa, and at 2 miles from the sea, on the south bank of a river, is the town named Castellon de la Plana. It is a useful mark from sea, the buildings being conspicuous at a distance, particularly one which is large and white.

CAPE OROPESA, of which the position has been already given, is high, of a dark colour, and extends irregularly outward to a flat point. On the Cape are two towers.

Two leagues S.W. by W. from the Cape is a shoal of 11 or 12 feet of water; and there is another at about a mile to the southward of the Cape: a near approach should, therefore, be avoided.

The COLUMBRETES, four clusters of islets and rocks, lie 30 miles S.E. [*S.* 65° *E.*] from Cape Oropesa. The largest and northernmost has, on its N.E. side, a little harbour, which occasionally shelters small vessels: even the Moorish corsairs have sometimes taken advantage of it, as a place of concealment, in order to carry on their depredations. The whole are comprised within the space of 3 miles, between lat. 39° 51′ and lat. 39° 54′. The central groupes lie to the West and S.W. of the large islet, about one mile; the southern groupe, of still smaller patches, lies nearly half a league more to the south, and between is a channel of 25 to 30 fathoms of water.

The Calumbretes were surveyed, in 1823, by Captain *Wm. H. Smyth*, who has observed that *Colibre*, the largest, from its comparative magnitude, may merit the name of island. Its harbour, now called *Port Tofiño*, appears as the mouth of an antient crater, although forming a tolerably secure anchorage for vessels, in westerly winds, in from 5 to 10 fathoms. Here privateers, and especially the corsairs of Barbary, have been known to lurk; and, as the summit of the hill commands an extensive horizon, they have pounced upon their prey very unexpectedly. The port is somewhat more than a quarter of a mile across at the entrance; and as it forms a capacious basin, would hold several vessels, in case of need, in from 5 to 12 fathoms, on an indifferent bottom of mud, weeds, and rocks. It is tolerably secure from all winds but those from N.E., East, and S.E., though, in the latter case, craft might find shelter close within the southern shore.

Monte Colibre, the highest and northernmost land, lies in lat. 39° 53′ 58″, long. 0° 44′ 27″ E. This hill, with a hummock to the southward, gives the isle a *saddled* appearance. These hills are covered with an exuberance of dwarf olives, geraniums, prickly-pears, myrtles, and brush-wood; but every other part exhibits lavas, obsidian, and scoriæ, as obdurate as if the fires to which they owe their origin had been but lately extinguished. A few rabbits were seen, and the margin abounds with crabs and other shell-fish. The whole of the interior is infested with snakes: these are generally between two and three feet long, finely striated with dark zigzag lines, on a bright yellow ground, blending whiter at the belly, and of great beauty.

At the south point of Port Tofino are two high conical rocks, which appear to have formed part of the antient crater. These, and other volcanic fragments, consist of similar materials, as lava, crystals, scoriæ, &c.

VALENCIAN COAST, CONTINUED.—FROM CAPE OROPESA, TO THE NORTH-EASTWARD, the shore is low and level to the distance of 16 miles, but the interior is of moderate height. Three towers, within this distance, protect the shore: 1, the *Torre de la Sal*, at 6 miles; 2, the *Torre Blanca*, at 9½ miles; and 3, the *Torre Cabicor*, at 13¼ miles, from the Cape. At a league *N.W. by W., true*, from the Torre Blanca, is a village of that name.

PENISCOLA.—At the termination of the low coast, above described, where the coast becomes hilly, is the *Torre Nueva*. The elevated coast extends 7 miles N.E. by E. ½ E. [*N.* 41° *E.*] to the town of PENISCOLA, in lat. 40° 22′ 40″, and long. 0° 28′ 8″ E., and 3 miles to the S.W. of which is the town of *Abadan*.

PENISCOLA is a small town, defended by a fortress, and covering a large rock, on the upper part of which is a large square building, the first object seen from a distance. The rock on which the town is situated is connected to the main by a tongue of low ground, so that it appears like an island. The road is little frequented, it being much exposed to the most dangerous winds; those from N.E. and East to South. In summer it is, however, resorted

resorted to, with winds from West and N.W., as the ground is good. The best station is to the E.S.E. [*East*] of the town, at about 3½ cables off, in 6 fathoms, fine sand. Should the wind come round to the east, vessels may, from this spot, weigh and stand off to the southward. But, observe that, should the wind happen to get round to the S.E., the best course is not to stand to the N.E. to clear the shore, but the contrary. Plenty of good water may be procured from a spring on the point without the town, at the west bastion.

From PENISCOLA, the coast northward is low and flat to the distance of 11 miles. On the shore, at 3½ miles N.E. [*N.* 24° *E.*], is the little town *Venicarlo;* and, at 6 miles, another, *Vinaros.* The latter may be known by a great church with a high steeple, standing almost in the middle, and having walls and fortifications about it, besides a fort and some warehouses between it and the sea. Here are several wells of good water. At 2½ miles N.E. ½ E. [*N.* 30° *E.*] from the point of Vinaros is a watch-tower, *Sol del Rio,* at the mouth of the little river *Senia,* the boundary of the two provinces Valencia and Catalonia. Here the shore begins to rise; and, at a mile and one-third from the tower, is a small beach, with a few houses, and another tower, *Casas del Cana.* All this part is entirely exposed to easterly winds.

PORT ALFAQUES.—This harbour, which may be considered as commencing at the Casas del Cana, affords excellent shelter, and is capable of admitting a large number of vessels, not exceeding frigates, as the depth is generally 3 and 3½ fathoms over the greatest part of it, an extent of 6 miles, nearly in an east and west direction, the bottom every where of mud. Those who intend to lie here for a considerable time proceed up into the bay, but such as take occasional shelter only, may come-to at pleasure, as the bottom is, in all places, clean. The port has been formed entirely by alluvium, or the mud and other substances constantly brought down by the River Ebro; so that all the ground on the north and east is marshy, and full of small lakes and ponds: it produces a great quantity of salt, which is prepared in the easterly and northerly parts of the haven, where vessels are constantly taking it in.

From the Casas del Cana to the town of RAPITA, a league and a half to the north-eastward, the shore is of some little height, and rises inward to a range of hills named the *Sierra de Monsia.* Rapita is the only inhabited spot in the haven. To the south-westward of it, at about one mile and a third, is the tower of *Codonnol,* with two guns.

Between the Sierra de Monsia and La Rapita is a small, round, and pleasant, hill, with a tower on it, called *La Gardiola.* As these do not fall in a line with any part of the Sierra, they are very useful in pointing out the entrance to the haven. They bear N.E. ½ N. [*N.* 18½° *E.*] from the tower of Codonnol, and N. by W. ½ W. [*N.* 36° 55′ *W.*] from the point of La Banna, the outer land on the S.E.

At the distance of two leagues to the eastward of Rapita, on the N.E. shore of the haven, is the tower of S. Juan, having two guns. The southern side of the haven, like the northern, is sandy and nearly covered with bushes. Neither fresh water nor wood are to be found here.

Having entered the haven, on proceeding eastward, be careful to avoid a point of sand on its southern side, which is 2½ miles E.S.E. [*East*] from Rapita, and which may be avoided by steering toward the tower of S. Juan, whence you come to an anchor as most convenient. Vessels should moor with two anchors N.W. and S.E.

A large ship, requiring only shelter from an easterly wind, should come-to with the tower of Codonnol North [*N.N.W.*], in 5½ or 6 fathoms, which will be in the midway of the entrance, taking care to keep clear of the shoal on the S.E. side.

Vessels from the eastward, in approaching the port, should be extremely cautious on advancing toward the low ground, more especially if night be coming on. With the summit of the Sierra de Monsia bearing N. by W. [*N.W. by N.*], or North [*N.N.W.*], they will be within the low shore on the east, and bring to, in the entrance, in 4¼ or 4 fathoms, there to wait for day-light.

The most dangerous winds hereabout are the *Maestrales* or North-westers, which are sometimes very impetuous, and require all attention from vessels at anchor, the ground being soft. The winds which blow into the haven are from the S.S.E. to the S.S.W.; and it has been observed that, during the summer, the S.W. winds, *Embas,* almost constantly prevail here in the day-time, but veer, in the night, to the North and N.E.

From

From the point of La Banna, or S.E. point of Alfaques, the alluvial or muddy shore continues 11 miles to the north-eastward, to the low point, improperly called *Cape Tortosa*, which is, in fact, the bar of the River Ebro, as here that river discharges itself into the sea, by two mouths, formed by the low isle called *Buda*, the eastern point of which is CAPE TORTOSA.

TORTOSA.—The EBRO is navigable only by vessels adapted to the river. The city of TORTOSA stands on its north bank, at the distance of 20 miles from the sea, and contains about 18,000 inhabitants: it has a handsome cathedral and an old castle. At two leagues below the town is the village *Amposta*, having a modern canal, which communicates with Rapita and the Port of Alfaques.

FROM CAPE TORTOSA the coast trends on the N.W., more than 2 leagues, to a small bay, EL FANGAL, formed as that of Alfaques, by the depositions of the Ebro. The depths are from 5 to 2 fathoms; but it is no harbour, as N.W. winds frequently rage here, especially in the autumn and winter, and the ground is loose and shifting.

All the low land between the Bay or Puerto del Fangal and the haven already described is denominated the Alfaques, and should not, in passing, unless the weather be very favourable, be approached nearer than to the distance of two leagues, and with the lead constantly in the hand. The general soundings around are, however, regular, mud and sand, with the depth of 5½ to 3½ fathoms.

The north side of Fangal Bay is of a middling height, and is distinguished by a tower of two guns, called the tower of Cape Roig. The shore hence extends to the N.E., rather winding and level. At 2½ miles from Cape Roig is the *Torre del Aguila*; and, at 2 miles from this, is that of *la Merla*; each has two guns. At 7 miles from Cape Roig is the fort *de S. Jorge*. The coast hence to the N.E. continues of a good height in the interior, but is lower along-shore, with a few spots of open beach, but no anchorage.

At 7½ miles N.E. by E. [*N. 32° E.*] from Fort S. Jorge, the coast rises, and presents, on its easterly height, the Fort *dell Coll de Valaguer*, which stands in latitude 40° 59′ 30″, and longitude 0° 58′ 40″ E. The coast hence again becomes low, and from it a small river, *Hospitalet*, falls into the sea. Here are several inns and other houses, with the tower of *Pennales*, on a point which terminates the low ground. From that tower, 2½ miles to the N.E. is another, *Milamar*.

CAPE SALOU, which projects more than a mile into the sea, forms a convenient place of shelter during a Levant or east wind. This cape and Point Milamar form a bay, extending in an east and west direction, about 5½ miles, near the middle of which, on the north shore, is the town of *Cambriles*, to the eastward of which is the road under Cape Salou.*

In the anchorage here a great number of vessels may ride in safety, under the lee of the cape: hence an extensive trade is here carried on with the neighbouring country, for its various productions. It is, however, safe in the summer only; for, from the beginning of autumn, destructive storms may be expected from the South, to which the bay is quite open, as well as to the S.E.

The ground is, in general, of sand, with patches of sea-weed, but free from rocks. The anchors hold so well, that it is necessary to weigh them frequently. There are warehouses on the shore, but no regular town. The roadstead is protected by a strong tower, *Torre Vieja*, to the southward of which, in 6½ fathoms, and at about half a mile from shore, is the ordinary anchoring-ground. Water may be obtained from a spring in a field near the tower. There is another tower and battery on the east.

Should a vessel resort to this place in the autumn or winter, during an easterly wind, she ought, so soon as this wind ceases, to draw farther out, lest it should draw round to the southward, and prevent her weathering the cape.

TARRAGONA.—Eastward of Cape Salou, the coast forms a bight, with a sandy beach, to the distance of 7 miles; at the extremity of which stands the fortified city of TARRAGONA, remarkable for its extent along an eminence, fronting the sea. The mole extends in a south-westerly direction, about three-quarters of a mile into the sea, and has a lantern 30 feet high, at the distance of 40 fathoms, within the mole-head. This harbour is,

* CAPE SALOU, when seen at a distance, appears like a low black island, having some spots of white sand.

 therefore,

therefore, capable of containing 100 sail of merchant-shipping, moored in tiers, with their heads to the S.W. by W., a bower-anchor to the westward, ropes on shore from the larboard-bow and quarter, and an anchor from the starboard quarter to the North [*N.N.W.*], but they lie exposed to winds from the S.W. and West; but these and easterly winds seldom blow home, although those from the N.W. and N.E. are frequently impetuous.

The mole and lighthouse of this place were nearly ruined by a gale, in or about 1822, and we have not been informed that any light has since been exhibited here, but presume that they have been re-established.

To some distance within the mole, there are 5 fathoms of water, which thence shoalens gradually. Spanish frigates commonly lie in the mole, but line-of-battle ships in the road without it, the ground being good, and the depths 15 to 8 fathoms. From the former depth, Cape Salou bears W. by S., the Mole Head N.N.E. ¼ E. and Cape Gros E. ¼ S., the ground soft brown mud.

As a caution to those visiting Tarragona, it should be known that H.M. frigate *Tribune* was stranded in the harbour on the 28th of November, 1839, in 3 feet of water. The ship had been lying snugly moored from the 8th of that month. On the 28th, at about 7, *p.m.*, a gale sprang up from the S.S.W., which shifted afterward to the S.W. and W.S.W. Top-masts were struck and every preparation made. At 9½ h. the small bower parted and immediately afterward the sheet cable also. The sea had previously got up surprisingly and washed the decks fore and aft. So soon as adrift, nothing could be done but to make sail on the ship and choose the best berth that could be found. She was accordingly forced through the heavy rollers, which kept constantly breaking over her till six o'clock in the next morning, when she was found well up on the beach at the head of the harbour, just above the watering place, where there is usually so little water that the ships' boats had never been able to get there. This will impart an idea of the extraordinary quantity of water which must have been forced in by the gale. The ship ultimately, after a whole night of 'thumping,' lay in a bed of sand, which afforded the advantage of saving the stores, &c.—*Naut. Mag.* Feb. 1840.

CAPE GROS is 6½ miles E. by S. [*N.* 79° *E.*] from Tarragona. It is higher than the coast to the west, with foul ground around it. Within a mile of the Cape, on the west, are the villages of *Torre Denberra*, *Altafulla*, and *Tamaris*: the latter has a great church. On the east the coast is again low, with an open beach: but the interior country presents a range of mountains, extending 16 miles to the eastward, and terminating with the point and chapel of S. Christoval or St. Christopher. Between these points there is no shelter from south-easterly or south-westerly winds, which is the more to be regretted, because the country is here well cultivated, and variegated with many towns and villages.

From Punta S. Christoval, and the coast eastward, within an extent of 7 miles, the coast rises up into high mountains, with lofty precipices toward the sea. This tract is denominated the Coast of Garaf, and is variegated with coves, the chief of which is that of *Sitges*, 2¾ miles from *S. Christoval Point*, occasionally resorted to by the coasters, for shelter from westerly winds.

Beyond the mountains of Garaf are seen, rising to a great height, those of *N. S. de Monserrate*: * the extent of these, from west to east, is considerable; the surface of them is rugged and uneven, exhibiting many lofty peaks, which serve as excellent land-marks. Of the latter, the most lofty bears *N.* 80° *E. true* from Villa-Nova, *N.* 1° *W.* from the town of Sitges, and *N.W.* from Monjui, near Barcelona, hereafter noticed.†

On the coast between Cape Gros and Point S. Christoval is a shoal off the village of Cubellas, westward of Villa-Nova, which reaches thence eastward to Point S. Christoval, on which stand the ruins of a church.

At about 5 miles eastward from the Point of S. Christoval is the Point of Terrosa, which is very high, and the most projecting of all this coast. Near the extremity of the high coast is a watch-tower, *Torre Garaf*.

We have now again arrived at a low sandy shore, which extends about 10 miles toward Barcelona. Upon this shore stands, at 2¾ miles eastward from the tower of Garaf, the castle

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* Nuestra Señora de Monserrate, or Our Lady of Monserrate.

† Monserrate is as celebrated as singular. A monastery and chapel stand on it, and on the peaks are numerous hermitages, inhabited by monks, who entertain strangers for three days, gratis. From the summit is a most extensive view of the country and sea, including the islands of Majorca and Minorca, at a distance of 45 leagues.

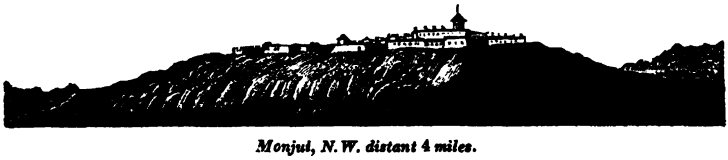
de Felis;

de Fells; and, at 2½ leagues farther, is the *Torre del Rio*, standing at the mouth of the River Llobregat, on the eastern side. Between the Castle de Fells and Llobregat, may be seen, on the shore, several lagoons or pools of stagnant water. Beyond the Torre Rio, the shore extends 3¾ miles to the harbour of Barcelona.

BARCELONA.—The entrance of this port is distinguished on the west by MONJUI, a mountain well known, and which may be seen at the distance of 12 leagues. It is a high hill, by the shore, detached from every other, with a fortress on its summit, which renders it the more remarkable. The hill bears W.S.W. ½ W. [*S.* 50° 45′ *W.*] from the old light-house on the mole of Barcelona, and N.E. by N. [*N.* 11° 10′ *E.*] from the mouth of the River Llobregat.

The Mole of Barcelona lies in latitude 41° 23′ 8″, and longitude 2° 10′ 25″ E. Within the Mole, which extends to the S.W., from the eastern side, a considerable number of vessels may lie, protected from S.E. winds. In the middle of the entrance is a shoal, one cable's length broad, having only 6 to 9 feet of water, but in the passage on either side of it are from 15 to 24 feet.

The port has been much improved by the construction of a new mole, as shown by the harbour plan on the chart. A light-tower stands at 70 fathoms within the mole-head, and a quarter of a mile to the southward of the old light-house, which exhibits an improved light at 60 feet above the level of the sea. The summit of Monserrate, being 4170 feet above the sea, in a line with Barcelona, bearing N.N.W. ½ W. is an excellent day-mark for the port.



Monjui, N.W. distant 4 miles.

A squadron of large ships may anchor, without the harbour, in from 16½ to 23 fathoms, muddy sand, by bringing the old lighthouse in one with the tower of a church called *La Merced*, and the coast of Garaf open with the south side of Monjui; but it will be necessary to weigh the anchor frequently. This is a convenient situation for weathering the mouth of the River Llobregat, should the wind get round to the East. With a southerly wind, if not very strong, a ship may stand away to the eastward, and if she make a course good to East [*E.N.E.*], may run along at 4 miles from shore, which is free from danger. The current on the coast generally sets to the south-westward. In sailing in, you must keep about half a cable's length from the mole-head, in order to avoid some loose rocks which the sea has washed from it. With a wind at S.S.E., a heavy sea sets into the harbour.

BARCELONA is the capital of Catalonia, generally rated as the third port of Spain, but is certainly the second in population and commerce, and is one of its handsomest cities. Its inhabitants have been celebrated for their industry and politeness. The chief manufactures are of cotton, leather, wool, and glass, excellent fire-arms and cutlery; hence they are included in the exports, with wine, brandy, cork, fruits, &c. The chief imports are corn, fish, and woollen goods. During peace it is computed that 1000 vessels enter the port annually, of which one half are Spanish. The city, which is fortified, stands in a plain, open to the S.E., but protected by hills on the north and west, being a healthy and delightful residence; but an easterly wind commonly brings fog, and, says a traveller, "produces such irritability, that the best friends, at those periods, rather wish to avoid each other." The country around is thickly set with villages, and abounds with wood, corn, wine, oil, fruits, honey, cattle, fowl, &c. The Quarantine regulations are very strict, and rigidly enforced.

BADALONA.—FROM BARCELONA to the north-eastward, 7½ miles, the coast is low; but there it is interrupted by a point, surmounted by the small fort named *Mongat*. At about a mile and a half short of it, on the shore, stands the little town *Badalona*; and, at the same distance short of Badalona, is the mouth of the *River Besos*, from which a shallow bank extends to the distance of two cables' length.

Off MASNOU and PREMIA, at about 3½ leagues to the north-eastward of Barcelona light-house, there is a shoal, the east end of which, having 4 fathoms, lies with the church of *Villasa* bearing N.E. by E. ½ E. In the channel are 6 fathoms of water. To avoid the shoal,

shoal, either in running to the eastward or westward, keep the whole of the town Mataro open to the S.E. of Villasa.

MATARO.—The town of MATARO stands on the shore at the distance of 8½ miles E. ¼ N. [*N.* 63° *E.*] from Mongat. Those approaching this place should know, that, although the shore be low and open, there is here a circular chain of rocks, within which is a channel admitting small vessels; and here they are occasionally sheltered from the heavy sea, which rolls along the coast from the offing to the north-eastward. Vessels, which may occasionally come to an anchor off this place, should take a berth at a mile to the southward of the town, where they may lie safely. Mataro may be known by three steeples, which are all in the town, and a large convent without it, to the westward. To the eastward is a small rivulet.

In the space between Mongat and Mataro are three little towns on the shore, at nearly equal distances, *Masnou*, *Premia*, and *Ville Sar*.

We now take an extent of 11 miles from Mataro to the town of *Calilla*. In the interval are, on the low shore, the villages of *Caldetos*, *Arens del Mar*, and *Canets*, but there is no shelter for shipping. To the S.S.W. [*South*] of the latter, Arens del Mar, at the distance of about a mile, is a reef of rocks, having over it a depth of 5½ fathoms.

From Calilla, the low shore extends 5 miles, E.N.E. ½ E. [*N.* 63° *E.*] to the PUNTA DE LA TOLDERA, in lat. 41° 39′ 10″, and long. 2° 45′ 35″ E. Westward of this are the villages Pineda and Malgrat. Westward of Pineda, at 4 miles from Point Toldera, is the chapel of S. Susanna; and S.S.E. [*S.E.*] from this about a mile, is a rock, having very little water over it: this rock lies with the chapel in one with a large house, remarkable as being the only one of that description, and Cape Tosa in a line with the town of the same name.

Point Toldera is flat and low, it having been apparently formed by the depositions of a river of the same name, which falls into the sea to the northward of it. The coast thence trends to the N.E. [*N.* 25° *E.*] about 2 miles, where we find the bay and town of *Blanes*, on the east point of which stands a large convent. Close to this point, on the south side, is a dangerous rock under water.

During westerly winds, in the summer, vessels of any size may take shelter in the Road of Blanes; but, in winter, south-easterly winds are very violent, and directly on-shore. Ships may come-to any where, from the Point of Toldera, as the ground is clean: but the most convenient station, with reference to the town, is in 7½ or 8 fathoms, sand, at about three cables' length to the south-eastward of it; as from this spot, should the wind get round to the East, they may get under way, and weather the point. Fresh water may be obtained at Blanes, from wells, and a fountain close to the beach.

CAPE TOSA.—FROM THE ROAD of BLANES, eastward, to CAPE TOSA, the coast is high and steep. The distance between is 5 miles, and the bearing, E. ½ N. [*N.* 61° *E.*]. At 2½ miles is the town of LLORET, having a large church, on a little bay or cove, the eastern side of which is a hill, with an old castle on it. Cape Tosa stands in latitude 41° 42′ 50″, and longitude 1° 53′ 50″ E. On its eastern side is the little town of the same name, part of which stands on the cape, and the rest on a cove, which is 410 fathoms in breadth, and which affords occasional shelter during westerly winds. The best anchorage is in 9 fathoms. Before the east point is an islet, at about a musket-shot from the main.

All along this coast, in the night-time, the fishermen keep fires in their boats, in order to catch anchovies and sardinas; the fires of charcoal-makers may also be seen upon the mountains.

FROM TOSA, *northward*, the coast continues high, with many steep precipices. The cove of S. FELICE DE GUIXOLS, two leagues from Tosa, is 682 fathoms in breadth, and has its town on the north side, upon a fertile plain. There are some rocks about the shore of this place, but the bottom, in general, is of sand, with sea-weed, so that vessels may anchor in safety, over a depth of 8 fathoms. This harbour is to be attempted in the summer only. Water and all other necessaries may be obtained at S. Felice, as it is one of the best supplied towns in Catalonia. Without the bay, to the eastward, are several rocky islets, the *Balellas*, not far from the land, but having a clear passage between.*

PALA-

* Another description says, "The west point of the bay is very high, and at the extremity of it is a great rock, so near that you can scarcely perceive a separation; the eastern point is also very high,

PALAMOS.—The Road of Palamos is 3½ leagues to the north-eastward from Cape Tosa. It is formed, on the east, by the *Punta Grosa*, a point of moderate height, which lies in latitude 41° 51′ 10″, and longitude 3° 4′ 23″ E. On the beach, in the bottom of the cove, is the town of Palamos, which has a small mole, extending to the westward, and forming a small harbour. This is the only place of shelter, during winds from E.S.E. to South, hence to the Bay of Rosas, and that only for a few small vessels, and in favourable weather. West and S.W. winds bring a heavy sea within the mole, and a N.W. wind is more destructive; for it is, at times, so violent, as to drive vessels from their anchors, &c. This spot cannot, therefore, be recommended to a stranger. On the eastern side of the entrance, nearly half a mile from shore, is a rocky shoal, the greatest depth over which is 10 feet: it is steep-to, there being near it 10 and 11 fathoms. Within this shoal is a rock, a little under water, at about a cable's length from the point.

From the rock, Windmill Point *(Punta del Molino)* bears E. by N. ½ N.; the church of Palamos N.E. ½ N.; and, a large house on the north side of the Bay in *one* with the high part of the hill under which the house stands, bearing North. The length of the rock, from N. to S., is 44 fathoms, and its breadth, from E. to W., 28 fathoms. It has 12 feet of water on its shoalest part, and is half a mile distant from the Molino, or Windmill, Point.

ST. SEBASTIAN.—From Punta Grosa, or Palamos Point, the coast to the N.E. continues high. At the distance of 4 miles is the Cape and Chapel of S. Sebastian. A cluster of islets, called the *Hormigas*, lie off the coast, nearly midway between: they are level, with a gentle slope, and the sea frequently covers them; but between them and the shore is a passage, sufficiently deep for a large ship, if keeping over toward the land.

Three miles and a half N.E. from Cape S. Sebastian, is Cape Begu, the land about which is very high. This cape is in lat. 41° 56′ 38″, on its north side is a cove, *Agua-Fria* or *Begu*, having a depth of 13 to 9 fathoms, sand, and which affords shelter from West and South winds: but, at the entrance, is a rock under water. There are a tower and some houses here. Beyond the north point of the cove are some rocks above water, close to the land, the *Losas de la Cala*. The coast now declines, and extends North [*N.* 20° *W.*] above 2 miles, where the high land, extending from Palamos, terminates, and the low shore of *Pals*, having a tower, commences. At the northern extremity of the low beach, 3 miles from the *Torre de Pals*, is the mouth of the *Rio Ter*, a considerable stream, upon the northern bank of which, at a league from sea, is the little town *Torruella de Mongris*, which stands at the base of a high hill, having on its summit the ruins of an antient castle.

The coast to the northward of the Rio Ter is high, and to the south-eastward of it are two islets, directly opposite to the river, *Las Medas del Estardis*, which are also high, and extend in a true N.W. and S.E. direction. The largest, on the N.W., is half a mile long, and has a fort for the protection of vessels, which may anchor on the S.W. The other is a lofty rock, shaped like a pyramid. The N.W. point of the largest islet is rather more than half a mile from the nearest point of the shore. The channel between is deep.

The elevated coast extends from the Rio Ter to the entrance of the Gulf or Bay of Rosas, a distance of 2 leagues. Within this distance, at 4 miles, is the *Torre Mongot*, and nearly two miles farther, N.W. ¼ W., is the little town *La Escala*. At a short distance beyond La Escala, on the shore, are the ruins of a fortress, with some houses, the only remains of the antient city of *Emporiæ*, by the moderns called *Ampurius*.

GULF or BAY of ROSAS.—The outer points of this bay are Point Mongat, on the south, and Cape Norfeo on the north. Both are high; but, from *La Escala*, above noticed, the coast declines into a low flat beach, forming a curve of 4 leagues northward. At 2 miles from Ampurias, on the south, the beach is divided by the *Rio Fluvia*, which there falls into the sea. At a mile from the sea, on the north bank of this river is the town of *S. Pedro Pescador*. The mouth of a lake, which discharges itself into the sea, is 2 leagues to the northward of the Fluvia, and upon the N.W. side of this

high, and has two pillars on it, by which it may be known; there are also some rocks lying near it, above water. Between these points is the bay, and in its bottom the town, situated on a fine plain, with a large convent to the westward of it, at the foot of the mountain. Great care is necessary that you be not surprised with the wind at S.S.E. which blows right in."

lake

take is the town of *Castellor de Ampurias*. To the north-east, a league farther, are the town and fortress of Rosas standing on the beach, with a suburb to the eastward.

The north side of the bay, off Rosas, is a fine and extensive roadstead, the land on the east being high, and the ground a loose mud, free from rocks, with sand close to the shore, and some patches of large sea-weeds. Small vessels commonly anchor to the S.W. of the eastern angle, in about 3 fathoms, abreast of the Arrabal or Suburb, at a cable and a half from shore; but, to be perfectly safe during a S.E. wind, run under the eastern shore of the bay, in 7 or 8 fathoms, until the castle of *La Trinidad** bears S.S.E. [*S.E.*] when you will be half a mile from the middle of the suburb, and 2½ cables from the high land. If more agreeable, you may even run closer in to the shore, or to 6½ fathoms, as all the ground is clear.

The most destructive wind here is that from the north, *Tramontana*, which comes down from beyond the Pyrenees, and rages with great violence: but as this wind proceeds from the bay, it can never occasion serious danger.

We now proceed around the peninsula, of which the chief projecting points are CAPE NORFEO and CAPE DE CREUX, and the principal harbour PUERTO DE CADAQUÉS. Of this peninsula the coast is, in general, high, but rugged and broken, in small coves, &c. Cape Norfeo has an islet on its south side, but it is steep-to, and the bottom clean. On the eastern side of the cape is a small creek, *Cala de Joncols*, sometimes resorted to by coasters during the continuance of a north-easterly wind. The S.E. point of the haven of Cadaqués is 2¾ miles N.E. by E. ¼ E. [*N.* 40° *E.*] from Cape Norfeo.

CADAQUES.—The PORT or HAVEN of CADAQUÉS extends more than a mile N.N.W. and S.S.E.; in the bottom is the town, partly on a rising ground and partly on a spot of beach. It is occasionally used by ships of war as well as merchant-vessels. The S.W. shore is steep, but the N.E. low broken ground; and, in the south-easternmost part of the entrance is a three-cornered islet, *Cucuruca*, on the outside of which the water is deep. There is another islet, *Arenilla*, close under the north shore, and several rocks within; but all over the haven is a good depth of water, on the bottom of strong clayish mud and sea-weed, particularly on the S.W. shore. The haven lies in lat. 42° 17′ 15″, and is frequented by vessels to the eastward: for often, on making Cape Creux, which is about a league hence to the north-eastward, with a wind at West, they find it change to the East, and therefore prefer taking the harbour to tacking off and on, during the night.

Excellent water may be had from a fountain in the town, near the beach.

WINDS.—The PREVAILING WINDS here, during the greatest part of the year, are from the North and N.E., which blow fresh, particularly in autumn and winter. In these seasons there is also, at times, a gale from the South. A S.E. wind, which, from its direction, might do much mischief, is never known to be violent or to continue long.

On the north side, and close to the harbour of Cadaqués, is the creek called *Port Lliegat*, extending 320 fathoms to the westward, and in which merchant-vessels, at times, take shelter; but north-easterly winds blow on-shore. To enter, keep the western shore on board, as rocks extend from the western point, on which the sea sometimes breaks.

CAPE de CREUX lies above 2½ miles N.E. ¼ E. [*N.* 30° *E.*] from Port Cadaqués. It is not very high, but uneven, and has the ruins of a watch-tower upon it. It is the easternmost point of Spain, and may be seen when 25 or 30 miles off. At a mile and three-quarters S.W. by S. from the pitch of the cape is the little *Isla Masina*, and very near to the cape is another islet, *Masa de Oro*, which is small, uneven, and of middling height. On the south side of the cape is *Infierno*, a great cavern. *The current here sets, in general, with some velocity, to the S.W.*

From Cape Creux the coast continues high to the port of *Sta. Cruz de la Selva*, a distance of 5 miles to the N.W. [*W.N.W.*]; but vessels may anchor along shore, in from 20 to 15 fathoms, coarse sand, with a wind from the S.W. The port or haven is open to the north, and extends inward about a mile, by half that breadth. Its depth, however, is sufficient to admit any ship. On the east point is a little hill, having on its summit a battery of three guns. The village is on the south side, and off it is anchorage for small vessels in 3¼ fathoms. The entrance of the port may be ascertained by the castle and

* The Castle of La Trinidad stands on the high land, at a little more than half a mile South [S.S.E.] from the beach of Rosas.

convent

convent of S. Pedro de Roda, which are on the top of a mountain 3 miles to the W.S.W. [*S. W.*] from the west point of the harbour, and nearly W.N.W. [*N.* 87° 7′ *W.*] from the tower of Cape Creux.

The coast, with the exception of the cove of Llanza, continues mountainous to CAPE SERVERA, which is a high promontory, and the last land on the coast of Spain. Its bearing and distance from Cape de Creux is N. by W. ½ W. [*N.* 37° *W.*] 9 miles.

III. THE BALEARIC ISLANDS; *comprehending* IVIZA *and* FORMENTERA, MAJORCA, *and* MINORCA.

IVIZA, (pronounced *Yveesa*) the EBUSUS and EBYSSUS of the antients, is an island composed principally of high land, with beautiful hills, and delightful valleys: it is fertile in corn, grapes, figs, and other fruit, and there are many wild olive-trees on the island. The inhabitants are employed chiefly in the manufacture of salt, which is highly esteemed. They are robust and hardy, and those who devote themselves to a sea-faring life are esteemed as the bravest and best seamen of the Spanish marine. Its principal harbours are IVIZA, the capital, on the S.E., and PUERTO MAGNO, or PORT S. ANTONIO, on the N.W. We shall commence our description with the little isle *Bedra*, on the S.W., and proceed thence eastward.

BEDRA lies off Cape Jueu, and is, in length, about three-quarters of a mile from east to west. Its eastern extremity is so lofty as to be readily discernible at the distance of 10 or 12 leagues, and even at a greater distance, when not in a line with the land. This isle bears from Cape de la Nao E. by S. [*N.* 82° *E.*] 51½ miles, and from Cape S. Antonio E.S.E. ¼ E. [*N.* 89° *E.*] 52½ miles.

Between Bedra and Cape Jueu is *Bedranell*, an islet of moderate elevation. The channels thus formed are deep, and the best is between Bedranell and Cape Jueu. On the extremity of Cape Jueu is a tower. The summit is covered with trees.

At a mile and a quarter S.S.E. ¼ E. [*S.* 48½° *E.*] from Cape Jueu is *Cape Cala Llentrica*, which is likewise lofty and wooded half-way down from the summit; the lower part is bare, and of a whitish colour. The coast between is clean, and the water deep, but there is no roadstead. The CALA LLENTRISCA, or Cove, at a mile to the eastward [*E.N.E.*], can, however, accommodate middling-sized vessels, which may be there sheltered from all winds but S.E.

Above 2½ miles from Cape Cala Llentrisca, and bearing E. by *S.* [*N.* 82° *E.*] is *Point Roxo* or *Red Point*, so called from its colour. This point is low, and a reef of rocks lies off it, at the distance of two-thirds of a cable's length.* Nearly three-quarters of a mile S.E. ¼ S. [*S.* 62° *E.*] from Point Roxo, is *Point Yundal*, low and flat, but descending from a high hill, white on the western side and steep. Off Point Yundal, at about a cable and a half, is another reef. From Point Yundal, nearly a mile and a half S.E. ¼ S. [*S.* 62° *E.*] is *Cape Falcon*, the upper part of which is high and precipitous, declining thence to a flat projecting point. Two rocky islets lie at a cable's length to the S.W. of the point, and another at about double that distance to the eastward of it. The small bays which are formed by the points above described are too open to the S.W. and South to be of consequence to strangers.

PORTAS POINT, the southernmost point of Iviza, which has a tower on it, lies about half a league E.S.E. [*S.* 89° *E.*] from Cape Falcon: it is projecting and flat, but declines from the high land called *Cuervo Marino*, and forms the north side of one of the FREOS (friths or narrow passes) between Iviza and Formentera.

Between Cape Falcon and Portas Point is the open bay named CUEVA LARGA, on the north side of which is a wharf for loading salt, which is brought from salterns, situate to the northward of Cape Falcon. At a stone's throw from the wharf are two cisterns of fresh water.

The FREOS, above mentioned, are the straits between Iviza and Formentera, which

* It is called *Point Roche* in Tofino's Chart, which represents a little port, of this name, immediately to the west of it.

are

are formed by an assemblage of islets, lying as represented on the Charts. Of these, two groupes, three in each, are on the north of the FREO GRANDE, or principal channel, while the ISLES DEL ESPALMADOR and ESPARDELL lie to the southward and S.E. The MIDDLE FREO is between the two groupes above mentioned; it is about half a mile in breadth, but its greatest depth is little more than 3½ fathoms, and that only in the middle of the strait, from which the water shoalens to either side, on which there are rocks. The GREAT FREO, latitude 38° 48′ 30″, is immediately to the north of the Isla del Espalmador; it is three-quarters of a mile broad, and has a depth of 7, 8, and 9, fathoms, shoaling, on the south, to 5½, and, on the north, to 3½, fathoms. In passing through, the water will be found so clear, that the stones at the bottom may be plainly seen.

PORT of IVIZA.—At about N.E. by E. ½ E. [*N.* 40° *E.*] 3½ miles from the tower of Las Portas, is the southernmost part of the ISLA GROSSA, which, with a rocky islet, *Botafuego*, close under its west side, and *Plana* on the north, form the eastern side of the harbour or port of Iviza. On the opposite side, at the distance of nearly three-quarters of a mile, stand the town and castle. The latter is about 3 miles N.E. ½ N. [*N.* 18° 15′ *E.*] from the tower of Las Portas, but between are several islets, the situation of which can be understood only by reference to the Chart of Iviza; two others, the *Great and Little Dado*, lie to the eastward. These are, in general, steep-to.

To make the port of Iviza, in a vessel of burthen, from the westward, the proper way is to run through the Great Freo, first steering for the tower on the north end of Espalmador. With this tower bearing E.S.E. [*East*], the strait will be entirely open, which is then to be passed, as nearly as possible, in mid-channel, only taking care to give a berth to the Isla *Ahorcados*, the eastern islet on the north side, as the depth, at a cable and a half from its shore, is only 3¾ fathoms. Having cleared the strait, if the wind be favourable, steer for the castle of Iviza, between the Dados, on the east, and the other islets already noticed, on the west; and having arrived between these islets, stand for the middle of the mouth of the port, leaving the isles Grossa and Botafuego on the starboard side. Having arrived to the depth of 7 or 6½ fathoms, come-to, with the best bower to the S.W., and nearer to the east than to the west side; so that, if the wind should come on strong from the eastward, you may make fast a hawser or cable to the island Plana, on that side. In winter, when the North and N.W. winds are most prevalent and violent, the anchor out to the N.E. must be attended to, as it may be apt to come home.

CAPE MARTINET, a lofty and broken headland, terminating in a point, stands at one mile E. by N. [*N.* 59° *E.*] from the southern point of the Isla Grossa; between is Talamanca Bay, open to the S.E., but having clear ground, and which has frequently been mistaken for that of Iviza.

E.N.E. [*N.* 46° *E.*] from Cape Martinet, one mile and a quarter, is *Cape Negrete*, which has taken its name from its dark colour: it is high, but not very projecting. At about three-quarters of a mile from shore, between the capes Martinet and Negrete, are two rocky islets, about half a mile asunder; they are steep-to, and large ships may run between them, as well as between them and the shore. CAPE LLEBREL, a promontory of a whitish colour, stands at rather more than a mile E. ½ N. [*N.* 63° *E.*] from Cape Negrete. It has a rock above water to the southward of it, between which and the land is a passage for boats only.

CALA LONGA, or LONG COVE, is a little harbour, at about half a mile N.E. by N. [*N.* by *E.*] from Cape Llebrel; the breadth of the entrance is but a cable's length, and the cove extends half a mile to the N.W. [*W.N.W.*]. The depth of the entrance is 11 fathoms, but it shoalens gradually inward, to the beach. This place shelters vessels from winds at N.E., S.W., and N.W., but it is open to the S.E.

At half a mile to the northward of Cala Longa is the point of *Cala Blanca*, which is high and white: and, at a mile to the northward from the latter, is the *Punta del Rio*, River Point, of a dark colour, and terminating some high hills. At a short distance to the northward of the latter is the mouth of the River *Sta. Eulalia*, at N. ¼ E. [*N.* 13° *W.*], one mile from which is the church of that name.

The ISLES of SANTA EULALIA are three islets off Point Araby, which is the N.E. point of the bay of Sta. Eulalia, at 4½ miles N.E. by E. ¼ E. [*N.* 41° 30′ *E.*]. The point is low, dark coloured, and projecting; the islets of unequal size, the largest is the farthest from the land. At about half a mile S.S.E. [*S.* 41° *E.*] from the easternmost part of the latter, and 4 miles E.N.E. ¾ E. [*N.* 55° *E.*] from Cape Llebrel, lies the reef

or

or shoal of Sta. Eulalia, over which the sea breaks, and it, therefore, requires every precaution during the night, or in thick weather. There is a depth of 16 fathoms around it.

In the Bay of STA. EULALIA vessels are sheltered from north-easterly and north-westerly winds. The best anchorage is off *Cala Poda*, about three-quarters of a mile to the westward of Point Araby.

At three-quarters of a mile to the northward of the eastern isle of Sta. Eulalia is a smaller one, *La Galera*, and eastward of this is a larger one, Cana: both are so near the land as to admit barks only to pass between.

CAPE CAMPANICHE, the easternmost point of Iviza, is 2¼ miles, N.E. by E. ½ E. [*N.* 39° *E.*], from Point Araby. Its upper part is high, but it declines to the sea. Off this cape, at the distance of a mile, is the island TAGOMAGO, which, from north to south, is about three-quarters of a mile in length; this isle is of moderate height, level from the middle toward the south end, but lower and uneven toward the north: it is steep around, there being one rock only, which is at about a boat's length from the north point. The channel between the island and cape has a depth of 14 fathoms, and is very practicable with a favourable wind.

PUNTA VERDE, Green Point, with a tower and village on it, is half a mile to the northward of Cape Campaniche. At a mile and a half N. by E. ½ E. [*N.* 3° *W.*] from the latter, is the *Laxa* or *Shoal* of *Figueral*, in extent twice the length of a ship's launch, steep around, and appearing above water, so that the sea constantly breaks over it. In the passage between it and the land the depth varies from 11 to 7½ fathoms.

The headland named PUNTA GROSA, which is high, perpendicular, and broken, bears, from the north point of Tagomago, N. by W. [*N.* 30° *W.*] 3¾ miles. An islet is so close to the extremity of the point as to allow boats only to pass through. Nearly in the same direction, at one mile from Punta Grosa, is the low point of Yoc, and three-quarters of a mile from the latter, N.N.W. ½ W. [*N.* 48° *W.*], lie the *Hormigas*, or Ants, two small low rocks, distant about a cable's length from shore, off a flat point, on which the sea breaks.

PUNTA DEN SERRA.—At rather more than 3 miles N.W. ½ W. [*N.* 68° *W.*] from the Hormigas Point is PUNTA DEN SERRA, the northermost point of Iviza, in latitude 39° 6′ 22″. This is of moderate height, level on the top, of a reddish colour, and covered with trees. A ledge of rocks extends from the point about a cable's length to the northward. On the north side of Iviza are several sandy coves, which are resorted to by small vessels.

The N.W. extremity of Iviza is the *Cape Nono*, an elevated land, very remarkable from its sugar-loaf shape, covered with trees. The extremity is a high whitish point, steep toward the sea. Three-quarters of a mile to the southward of this point is *Punta Foradada*, which is likewise high and steep: at a quarter of a mile farther south are the isle and cove Salada. At 2½ miles from Peak Nono is *Cape Negrete*, of moderate height, and covered with wood: at this point commences *Puerto Magno*, or the *Port* of *S. Antonio*.

The PORT of S. ANTONIO, from Cape Negrete, is 2½ miles in depth to the S.E., the breadth of its entrance being half a league. This place is, in summer, a good retreat for men of war, as well as for smaller vessels; the depths decreasing from 20 to 2 fathoms, and even to one fathom at the bottom of the bay; but, in winter, the winds from the North and N.W., which are commonly of long continuance, send in a heavy sea, and the port is then fit for those smaller vessels only, which can run as far in as the soundings may allow. The bottom is, throughout, an excellent holding ground. In taking the harbour there is no difficulty, nor any shoal but what is visible. Whether a vessel comes in from the north or from the west, she has only to steer for the middle of the entrance. So soon as Cape Negrete is in a line with Cape Nono, she will be in 18 fathoms, and hence may run to a depth of 7 or 5½, and there come-to, with the church of S. Antonio about East [*E.N.E.*]. Vessels should here be moored to the N.E. and S.W., with the best bower in the latter direction. Smaller vessels, that run far up, may moor with one anchor out, and a cable fast on shore. A stream of excellent water falls into the bay, at half a mile to the southward of the church, on the eastern side.

Without the harbour, on the west, the coast forms several points and coves, to the distance of 3 miles, the last projection to the northward being Punta Robira, which declines into the sea. At N.E. by N. [*N.* 13° *E.*] 2 cables' length from this point is a rocky islet, *Pajar*, which is steep-to.

On the WESTERN COAST, at three-quarters of a mile S.W. by W. ½ W. [*S. 39° W.*], is *Punta Pedras*, Rocky Point, which is of moderate height. Two miles to the southward from the latter is the *Cala Moli*, a small open cove, in which small vessels lade timber, when the weather will admit. Two miles farther south is another cove, *Cala Padella*, narrow at the mouth, and curving to the S.E., with from 9 to 5½ fathoms of water, over good holding ground. At S. by W. ½ W. [*S. 3° E.*], 3½ miles from Cala Padella, is Cape Jueu, already described on page 39, with the isle Bedra, &c.

Between Cala Padella and Cape Jueu, at about half a mile N. by E. [*N. by W.*] from the Cape, is a shoal of sand, of 11 feet, called the *Mataret*: during a swell the sea breaks over it. *La Bota*, a sunken rock, over which the sea breaks constantly, lies also at N. by E. [*N. by W.*] a mile and a half from the easternmost part of Bedra. These must, in course, be carefully avoided, on approaching toward Bedra, &c.

The CONEJERA, or CONEY ISLES, a groupe of uninhabited islands, lies off the western coast of Iviza; to the westward of it is a smaller groupe, the BLEDA ISLES. The largest of these is the CONEJERA GRANDE, on the N.E. It is a mile and a quarter in length, from north to south, and of middling height. In an open bay, on the eastern side, is good anchorage.

The BLEDAS and other little isles, lying to the westward of the Conejeras, are not so important as to require a particular description. The passage between Esparto and the southernmost isle is three-quarters of a mile in breadth. The ground around the isles is quite clear, and there is no danger but what may be seen.

THE ISLAND FORMENTERA.

IVIZA with FORMENTERA were called, by the antient Greeks, PITYUSE, or the Isles of Pines. Formentera is an irregularly shaped and uneven island: it is, in its highest part, but moderately elevated. The eastern portion, denominated LA MOLA, is higher than the western, and between, as shown on the Charts, is a tract of low ground, declining to the sea, and terminating in a sandy beach on each side. Thus the *S.W. point of La Mola* and *Point Anguila*, the S.W. point of the isle, form a low sandy bay, while the land on the east and west of these points increases in height. Much pine-wood still continues upon the island, and there are but few regular inhabitants.

The coast of Formentera is, in general, clear; and, in fine weather, the currents, in general, run to the north-eastward; but, if stormy, they change with the wind.

POINT ANGUILA is situate in lat. 38° 40′ 30″, and long. 1° 26′ 58″ E. It is steep toward the sea, and even on the surface. At the termination of the cliff to the N.E., a mile distant, is a tower, the *Torre de los Catalanes*. The coast, which trends from the point to the westward of north, continues high and steep; and, at a mile and a half from it N. by W. [*N.W. by N.*] is distinguished by the tower of Garovaret: three-quarters of a mile thence North [*N.N.W.*] is *Cape Berberia*, or Cape Barbary, which is equally high and steep with the coast southward. From this cape, however, the coast, northward, declines in height; and, at a mile and a quarter from it is *Point Cala Saona*, low and level, but projecting. Hence, at the distance of three-quarters of a mile, is Point Gavina, declining from a height, on which stands a tower of the same name. Between these points is the Cala, or Cove, *Saona*, extending about half a mile inward, with 5½ to 4½ fathoms of water, and therefore, under circumstances, a convenient place of retreat; but it is open to winds from S.W. to N.W., which send in a great sea.

ESPALMADOR.—We now again arrive at the ISLA DEL ESPALMADOR, or Careening Island, already noticed. Point Espalmador, on the western side of this island, is level, of a red colour, and steep toward the sea: near it is a tower. To the northward of this point the coast is low, with several inlets. The ISLE ESPARDELL, which lies at the distance of a mile and a quarter from Espalmador, is of moderate height, and even on the surface. A portion of its south end is detached, and connected only by a ledge of rocks; and at the north end is a large rock. One mile W.N.W. [*West*] from the middle of Espardell, and nearly half a mile from the coast of Espalmador, is a rocky shoal of 3 fathoms, steep all round.

Between the Trocados, or south end of Espalmador isle, the coast forms a bay to Point Prima,

Prima, a low but steep point, at the distance of 2½ miles S. by E. ½ E. [*S.* 37° *E.*] *From Point Prima to the southward*, the land rises in height to the distance of half a mile, where it is terminated abruptly by *Point Carnache*, on which is a tower. A wide and open beach, *Playa del Norte*, now extends 3 miles to the south-eastward, and is interrupted by only one small inlet, which admits fishing-boats. In the bay the water is deep, the ground clean and good.

From the north point of La Mola, around to the S.W. point, the land is high; and at the latter commences the *Playa del Medio Dia*, or South Beach, from which a shallow bank extends outward, with an indifferent bottom, having 5½ fathoms on its outer edge, and shoaling to 2 fathoms near the beach: this bank reaches to the Torre de los Catalanes, already noticed.

MAJORCA OR MALLORCA.

MAJORCA with MINORCA were the BALEARES of the antients, by the Greeks called GYMNESIA. MAJORCA, called by the Spaniards MALLORCA, pronounced *Malyorca*, is, in general, lofty, with ranges of high mountains covering the whole, from the middle to the northern coast, and so closely connected as to leave only a number of deep vallies and gullies between them, bordered by precipices. Of these mountains, the most westerly and most remarkable is a high peak, called, by the natives of the island, the *Puig de Galatzo*, which stands in the latitude of 39° 36′; the highest mountains are, however, those on the north side, called the *Silla de* (Saddle of) *Torrellas*, and the *Puig Mayor*, or Great Peak. There are several others, but less elevated.

From the middle of the island to the south coast, the surface is much lower than on the north, but it presents several hills and agreeable aspects. The principal bays are those of PALMA, on the S.W., of ALCUDIA and POLLENZA on the N.E. The land is finely variegated by corn-fields, vineyards, orchards, and meadows; and its products, including oil, honey, &c., are highly esteemed. The air is, generally, temperate and wholesome, but excessive heat and drought do sometimes cause a scarcity. The capital, PALMA, is an elegant city, and its inhabitants are computed at 10,000. It is fortified in the modern style; has broad streets, spacious squares, stately stone houses, and twenty-two churches.

PALMA.—The BAY of PALMA is formed by Cape Cala Figuera, on the west, and Cape Blanco on the east. The bearing and distance from the first to the latter is S.E. [*S.* 66½° *E.*] 4½ leagues. The depths all over the bay are 27, 23, and 18, fathoms, sandy bottom, excepting in the vicinity of Capes Regana and Enderrocat, on the eastern side, where the bottom is rocky.*

CAPE CALA FIGUERA is much lower than Cape Blanco, on the opposite side, but the shore of both is clean, and may be approached as closely as can be requisite. A tower stands on the summit, near the point, on which, in the night, signals are made of vessels within sight in the offing. On the N.E. of the point is a cove of the same name, and a little more to the north, another, *Portals*. Farther north, on the western side of the bay, are two islets, *Sec* and *Salas*, the first at 2½, and the second at 4, miles from the cape. There is a passage between Sec and the shore, in which the least depth is 9 fathoms. Salas is high and clean on the outside, but between it and the land is a channel for small craft only. To the north-eastward of Salas is the *Cove of Porraza*, a convenient shelter during all winds, excepting those from S.E. and South; with the latter, this spot is dangerous.

Eastward of the Cove of Porraza are three rocky islets, denominated the *Isletas*: the southernmost has a tower on it. The outside is bold-to. On the point next eastward, half a league from the Isletas, is a lighthouse, which is lighted every evening; to the north-eastward is another point, *Palayres*, with a square tower on it, much resembling the lighthouse: between these is the cove named *Port Pi*, in the mouth of which a frigate or smaller vessel may anchor, by having a spliced cable from the bow out to the E.S.E., and coming-to

* It was announced, in January, 1834, that a Catalonian company had established a steam-boat to run once a week between Barcelona and the towns of Palma and Port Mahon, in Majorca and Minorca. The first vessel thus employed is, or was, *El Balear*, having the mails, with two engines of 50 horse power each, which enables her to make the trip over in about 16 hours.

between

between the two points which form the cove, making fast, with four cables, to the rocks on each side, where the vessel will be in from 16½ to 18 feet of water, on a good bottom, and well covered from the sea.

Vessels stand on northward, toward the town of Palma, to the front of the Lazaret, and all classes may anchor here in 9, 7, and 6, fathoms, the shallowest water that will suit ships of war. From this situation the cathedral will bear E. by N., and the Lazaret will be in a line with the castle of Belver, bearing N.W. ¼ W. The latter is an antient structure, with round turrets, on the summit of a little hill clothed with pine-trees, and which is, therefore, a pleasant object from the sea. Between the anchorage for men-of-war and the Lazaret is the ordinary station for frigates, xebecs, and smaller vessels: for, in the direction of N.W. ¼ W. [*N.* 69° *W.*] above mentioned, the ground shoalens gradually until the lighthouse appears in a line with the north corner of the castle of S. Carlos; here the ship will be within a cable's length of the shore, in 4 fathoms, on good holding ground: between that spot, and within a boat's length of the shore, the water shoalens to 2¾ fathoms.

In anchoring at the Lazaret, it is proper to moor N.W. and S.E., for a S.W. wind sends in a heavy sea, and this wind is very prevalent in the winter season. A south wind also sends in a sea, but this is less frequent. Small vessels may run on to the mole of Palma, having only to keep it on the eastern or starboard side. The depth of the point is 2¾ fathoms, but it shoalens within very quickly.

CAPE BLANCO, on the eastern side of the Bay of Palma, is of moderate height, perpendicular toward the sea, white, and has a tower on it. The water off it and the adjoining coast is very deep. From Cape Blanco to Cape Regana the coast is reddish, not very projecting, and nearly of the same height, but it declines a little toward *Cape Enderrocat*, on which is a tower. Hence to the Mole of Palma the land is low, with a sandy beach, but the water is deep.

From Cape Cala Figuera to the N.W. by N. half a league, is the rocky islet *Toro*, round and of middling height. On the outside of it, the water is so deep that a ship of war may pass close by it. Between the islet and point within it are three rocks above water. N. by W. [*N.* 30° *W.*] 2 miles from Toro, is a larger islet, *Malgrat*. It is higher than Toro and steep around. Between Toro and Malgrat, the coast of Majorca forms a bay or indent; the shore is of a reddish colour, high and steep, and hence called *Pennas Rotgas*, or Red Cliffs. The water is deep.

Cape Andrichol, which is 2 miles N. by W. from Malgrat, is very lofty, perpendicular, and reddish; its summit is covered with pine-trees. The coast between forms the Bay of Santa Ponza, which extends 2 miles to the north-eastward. A cove of the same name is on the eastern side of this bay, and to the north of the cove stands a castle.

The *Mole of Andrache*, to the southward of the haven of the same name, is perpendicular toward the sea, and has a tower on the summit, which, like the cape itself, is of a gray colour.

The Bay or Haven of Andrache, to the northward of La Mola, is about 3 cables' length broad at the entrance, and the depth here is 6½ fathoms. This place is inconvenient for large vessels, because the water shoalens quickly to 4½, 3, and 2¼, fathoms, but is occasionally useful to small. The on-shore winds, from South and S.W., bring in a heavy sea, and then the best station is as close as possible to the north shore, with a cable made fast on the land, in order to be covered, as much as possible, both from wind and sea.

DRAGONERA.——N.N.W. ½ W. [*N.* 48½° *W.*] above 3 miles from the Mole of Andrache is the S.W. point of the Isle Dragonera. This isle is of considerable elevation, and extends from S.W. to N.E. nearly 2 miles. There are two towers on it, of which one is on the highest part. The north side is perpendicular toward the sea, and the surface slopes gradually down to the south end. Between the isle and Majorca is a strait, two-thirds of a mile in breadth, in which are two islets and some rocks above water.

CAPE GROSER, which is half a league to the north-eastward of Dragonera, is higher than the land to the southward, and steep toward the sea. Close under the cape are two rocks, just above water, and steep-to. Between Cape Groser and Point Dea, a distance of 5½ leagues, there seems to be nothing remarkable on the shore, excepting the towers of *Angelica* and *Dea*, standing on their respective points.

At 3½ miles N.E. by E. ¾ E. [*N.* 40° *E.*] from the tower of Dea is the outer point of Port Soller. The entrance of this little harbour is not readily distinguishable by those sailing along the land, being narrow and formed by high lands overlapping each other.

NORTH-

NORTHERN COAST.— *Between* PORT SOLLER *and* CAPE CATALUNA or CATALONIA, a distance of 9 leagues, there is little worthy of particular description. Cape Cataluña projects, to a certain distance, perpendicularly over the sea, but it is not so high as the land to the westward: on its eastern side is the Cala Figuera, a cove extending to the S.W., but rendered useless by the heavy sea which sets into it. CAPE FORMENTON, the northernmost point of Majorca, is rather more than 2 miles to the eastward of Cape Catalonia. It is of moderate height, steep toward the sea; but, when seen from a distance of 8 or 10 leagues, the eminences of which it consists appear like so many islands. Between the capes is a hill, *(Nefuradade,)* which, at about two-thirds of its height, is pierced through, so that the light through the opening may be seen.

The WHOLE of the NORTHERN COAST, from Cape Groser, on the S.W., to Cape Formenton, on the N.E., is very high, perpendicular toward the sea, but clean. During winds from the North and N.W. it is, however, to be dreaded; for, besides the heavy boisterous sea, which then sets in upon the shore, it frequently happens that vessels near the land are becalmed, owing to an interruption of the winds by the high mountains, and are then driven on shore by the swell. All vessels passing hereabout, should, therefore, stand far out to sea; more especially as there is no convenient harbour or roadstead.

BAY of POLLENZA.—The north point of this bay is about 3 miles S.W. by W. ¼ W. [*S.W.* ¼ *S.*] from Cape Formenton. The opposite point, *Negra*, is a mile and a quarter to the southward of it. The Bay of Pollenza admits ships of any size; but, if many of the large class were to resort to it together, the greater number would remain exposed to the wind from E.N.E., and a few only would be sheltered.

Immediately on entering the bay, the Point of Pollenza, with a battery on it, will be seen to the W.S.W.: farther back from the shore, on an eminence, stands the castle. Close to the point, the depth of water is 3¾ fathoms, and, at a short distance out, from 6 to 8 fathoms. The best anchorage, for a ship of the line, is at about two cables' length to the west of Pollenza Point, in from 5½ to 7 fathoms, sandy bottom: a frigate may run into it from 4½ to 3¾ fathoms, and smaller vessels more to the north, down to 2 fathoms: but, it is to be observed that, with 3¾ fathoms, there are many loose stones on the ground, with large muscles, which cut the cables.

The N.W. wind blows strongly into this bay, with a short sea that prevents boats from carrying out the anchors: it is, therefore, proper to take every precaution in time, and to moor N.W. and S.E., so that the vessel may strain equally on both anchors. In making for the road, with the wind fresh from N.W. and North, it is requisite to be prepared for violent squalls, which come down from the mountains, at times, of sufficient strength to overset a ship, and by which many have been dismasted.

In the bottom of the bay, at 2 miles S.W. by S. [*S.* by *W.*] from the castle of Pollenza, is a little harbour, called *Port Allas*, very convenient to vessels drawing less than 2¾ fathoms, which is the ordinary depth in those situations, wherein they can be sheltered; the winds from N.W., North, and N.E., nevertheless, send in a considerable surf.

All along the shores of the Bay of Pollenza, as far as the anchorage or roadstead, the depth is from 11 to 9 fathoms; and, in the middle, from 43 to 18 fathoms, bottom of sand and fine gravel.

BAY of ALCUDIA.—We have now advanced to the Bay of Alcudia, which may be considered as commencing at Cape Minorca, on the N.W., and at Cape Farruch on the S.E. The bearing and distance, from one to the other, are S. by E. ¼ E. [*S.E.* ¼ *S.*] 6¼ miles. At half a league to the south-westward from Cape Minorca is *Point Torrents*, low and projecting, but at a short way from a range of hills, not so high as that of the Cape. At about half a mile south-westward from Point Torrents lies the islet *Alcana*, flat, and near the land; from this islet a shoal of rock and sand extends on the south and east to the distance of a cable and a half; and, on its outer edge, is a depth of 2¾ fathoms. More than a mile to the west of this islet, on an eminence, stands *Torre Major*, the Great Tower, furnished with artillery, &c. The interior part of the bay extends from the point under this tower to the *Pons*, or entrance of the Albufera, a lagoon of considerable extent, formed by torrents from the mountains and high lands.

The Bay of Alcudia, although more open to winds from the N.E. and East, which bring in some sea, is preferable to that of Pollenza, as the ground is cleaner, and more easy to take when the wind is from the N.W. or North, and it is not so subject to squalls from the mountains, excepting only the part of the exterior coast, between the islet Alcana and Cape Pinar.

Pinar. The south coast of the bay consists, generally, of low land, and near the middle of it is a low islet, *Porros*. It is clean all round, from the Road of Alcudia to Cape Farruch; at a cable's length from shore the depths are from 3 to 4½ fathoms, increasing at a little farther off to 9, 18, and 20, fathoms. Cape Farruch is very high next the sea, but the land within rises to a hill, in an eastern and western direction, with an extensive plain on the summit, connected with a chain of other hills, neither so elevated nor so level.

CAPE FARRUCH to the SOUTH-EASTWARD.—At about one mile to the S.E. from Cape Farruch, on an elevated point, stands the Atalaya, or Watch-Tower, of *San Morey*: at a mile and a half, in the same direction from that tower, is Point *Fon Salada*; and, at three-quarters of a mile farther is the tower of *Falconera*, on a steep point, of moderate height, and declining from the high land of the interior. A bare rocky islet, *Labarca*, lies at two or three cables' length to the northward of the latter: it is steep-to.

At 2½ miles south-eastward from Point Falconera is *Cape Freu*, the extremity of the interior high land: near it is an eminence, of a square figure, which appears, at a distance, like an island. The cape is of a dark colour, and steep-to: on its southern side may be seen a great cave, at the back of the point, nearly pierced through by the sea: on the land above this is the watch-tower of *San Yaumal*.

CAPE PERA, the easternmost point of Majorca, is 2 miles S.S.E. ½ E. [*S.E. ½ E.*] from Cape Freu. It extends outward to a considerable distance, is of moderate height, and level on the summit, on which a tower stands perpendicularly over the water; and thus, being higher toward the point than toward the interior, the land here, at 6 or 8 leagues off, has the appearance of an island.

S.W. [*S.S.W.*] 2½ miles from Cape Pera is the Point *Fon de la Cala*; and, at a mile and a half farther, in the same direction, is *Cape Bermeio*, or Red Cape, so called from its colour, and seen from sea to two-thirds of its height, the remainder being covered with pine trees. This cape is broad and lofty, has a tower on its summit, beyond which another, *Masot*, farther up the country, is seen. At about a mile and a half W.S.W. ½ W. from Cape Bermeio is *Cape Ratx*, or *Ratche*, lower than the former, dark coloured, and extending outward to a short distance only.

BAY OF ARTA.—Cape Ratx, above mentioned, is the north point of the BAY of ARTA, which extends thence southward to *Amer Point*, a distance of 4 miles. The latter is low, though projecting, and has a castle: the coast of the bay is also low. Within the bay several rocky islets form what is called *Port Vey*, a shoal spot, open to winds from S.E., &c., which may be known by the castle or tower of *Port Vey*, westward of those rocks, upon a steep round eminence.

On the north side of Point Amer, at a convenient distance, is good anchorage for vessels of every class, in from 13 to 9 fathoms, sandy bottom, and good holding-ground, sheltered from winds between S.W. by the West to N.W. Should the wind here even change to blow on shore, it will be easy to get under weigh to the northward, should weathering the cape to the southward be attended with any difficulty.

The CALA, or COVE, of MANACOR lies nearly 4 miles W.S.W. ½ W. [*S.W. ½ W.*] from Point Amer: it has a tower over its western point, and may be readily known, although the coast is generally low and even. It is capable of receiving small coasters only, which lie sheltered in all winds.

At 7 miles to the south-westward of Cala Manacor, is PORT COLON, another little harbour for small vessels, but nearly choked up. Between are several small coves, but no place of shelter. On the N.E. point of the entrance of Port Colon is a tower, which is a useful mark for the spot, as there is no other near it. A vessel here may safely approach, for just under the point is a depth of 9 fathoms.

CALA LONGA, *Long Cove*, is a league and a half to the south-westward of Port Colon. Its entrance is wider than that of the latter, and opening to the S.E. [*E.S.E.*] Under the S.W. point of this entrance is a shoal of 5½ feet, within two boats' length of the land. This port admits frigates, which should moor head and stern, in from 3¾ to 4½ fathoms, to the westward of the entrance, there not being room to swing in. This place, however, is not to be made out by a stranger without some difficulty, the coast being very even.

SOUTH COAST.—BETWEEN CALA LONGA and CAPE SALINAS, the southernmost part of Majorca, are several little harbours and places of shelter, known to the coasters. Cape Salinas is low, well wooded, and has, on its highest part, the round tower of *Negosta*, whence

whence the land gradually slopes downward to the sea, and a shoal thence stretches out to the distance of half a cable's length: but, at three cables, is a depth of 9 fathoms.

Port Compos, which is nearly 4 miles to the north-westward from Cape Salinas, admits small coasters only. On its western point is a tower, and beyond this some rocks above water, with the salt-marshes and salt-works which supply the island with this valuable commodity. The land hence on the N.W. to *Point Negra*, is low: but on this point stands the *Tower of Estedella:* and at a mile and three-quarters within, or to the eastward of, the latter is the *Tower of Rapita.*

Cape Groso is about 2 miles to the westward of Point Negra. Here the land increases in height, and thus extends, nearly 5 miles, to Cape Blanco, already described on page 44.

Cape Blanco, having a round tower, and Cape Cala Figuera, as already shown, are the two outer points of the Bay of Palma. The latter bears from the former N.W. [*N.* 66½° *W.*], 4½ leagues. The coasts here are bold, but the bay is quite exposed to South and S.W. winds. The city of Palma may be easily recognized by its churches, and particularly the cathedral, which stands near the walls, toward the sea. The mole of Palma extends about 150 fathoms into the sea, and has a fort on its extremity: within it are from 15 to 10 feet of water. Near some windmills, at the S.E. of the town, water may be obtained.

CABRERA.—This island, lying off the south coast of Majorca, is uncultivated, and its productions are a few wild goats and water. The only inhabitants are comprised in a very slender garrison, which occupies a fort at the entrance of the haven. The middle of the island is situate in latitude 39° 7′ 30″, long. 2° 59′ 0″ E. The land is level, but considerably elevated, and the extent about 3 miles from N.E. to S.W. The coast about it is generally clean, with deep water and sea-weed. *On the south side*, about the middle of the isle, are four rocky islets, the *Estellens:* the ground around them is clear, and the water deep. On the S.E. end of Cabrera is another and larger islet, *Imperial*, which is higher than the former, and equally steep-to. *Cape Ventoso* is the N.E. point of Cabrera; and, at one-third of a mile from it, to the northward, is *Redonda*, an islet larger than Imperial, between which and the cape is a channel admitting vessels of every description, the depth being from 9 to 11 fathoms.

Hereabout strong currents are frequent, and the tides are very irregular, rising or falling a foot or two, according to the state of the winds.

Cape Lebeche is the N.W. point of Cabrera: on it is a cave, in the precipice, called the *Bishop's Cave*, at the entrance of the haven.

THE ISLAND MINORCA OR MENORCA.

This island is of moderate height; its surface level, with one remarkable elevation toward the middle, called *Mount Toro*, having on its summit a convent, dedicated to the Virgin. The air is moist, and soil rather barren, being chiefly calcareous, with lead and fine marble. The principal harbours are, Port Mahon, at the east end, *Fornells*, on the north side, and *Ciudadella*, on the west.

PORT MAHON.—The entrance of this excellent harbour, which is not more than two cables' length broad, lies in latitude 39° 52′ 15″, and longitude 4° 23′ 40″ E. At a mile up, on the western side, is the town of Arrabal or St. George; and, at a mile and a half more, on the same side, is the town of Mahon. This town is the chief commercial place in Minorca; the harbour is esteemed one of the finest and most commodious ports in the Mediterranean. The land on the north side of the harbour is extremely barren, producing little or nothing, except myrtle, great quantities of which are used in the tanneries of Mahon, breaming of vessels, and providing ships with brooms. The south side assumes a better aspect, being in a good state of cultivation, laid out principally in gardens, orchards, and orange-groves, which afford a plentiful supply of refreshments for a fleet.

In taking the Harbour of Mahon, with scant or contrary winds, that is, with winds from the N.E. round by N.W. to S.W., attention must be given to a shelf of rocks, stretching to the southward from the western point of *Mola Cove*, on the north side of the entrance, and to the distance of one-third of a cable, where the depth is 3 fathoms, quickly increasing farther out. Equally to be regarded is a reef stretching from *Point Philipet*,

Philipet, more than half a cable to the South [*S.S.E.*], where the depth is 3 fathoms, and quickly increasing to 4 and 4½ fathoms. On the opposite side, from Point St. Philip, another reef extends half a cable out to the eastward. The water breaks over these three reefs, when there is even but little swell, to one-half of their length; but, when there is much sea, it breaks all over them. Hence it is that, when the entrance of the harbour is seen obliquely, with the points in a right line, or nearly so, the whole seems to be one continued shoal.

Nearly opposite to Philipet Point, and close under the battery of St. Philip, from the point called *Es Redo*, is another shelf, extending nearly one-third of a cable from the shore. On this the sea never breaks, unless during a violent gale from the North or N.E., at which time it is dangerous. It is also to be guarded against with the wind at S.W., because, with a scant wind, it is necessary to haul up, toward the shore bordered by this reef, as much as prudence may admit.

Should the weather be either too unfavourable, or too rough, to allow a vessel to weather all these shoals, she may come to an anchor between them, or farther out, in 18, 23, or 27, fathoms, on good ground. It is, however, to be noticed that, in such a position, without the shoals, there is always a great swell with the wind fresh from the North.

Cape Mola, a promontory of the peninsula of Santa Anna, which forms the north side of the entrance of Port Mahon, is distinguished by a signal tower. The cape is of moderate height, but perpendicular over the sea: it has three high rocks near its base, which, being clean and steep-to, may be approached without danger. The signal-tower on the cape communicates with another, which stands to the northward of the naval arsenal, and opposite to the town of Mahon, in lat. 39° 54′ 12″, and long. 4° 20′ 50″ E. In this port there is excellent water, which may be had in any of the coves; where the water is so deep, that ships of 300 or 400 tons may lie alongside the rocks. There is no possibility of getting out of the harbour without a leading wind.

N.E. COAST.—From Port Mahon to the Northward.—At the distance of 200 fathoms, nearly E.N.E. from Cape Mola, is the extremity of Point Espero, the easternmost point of the peninsula of Santa Anna: and, at nearly a mile and a half N. by W. [*N. 32° W.*] from Cape Espero is Cape Negro. The coast between is rocky and irregular, and it forms several indents, which are open to the N.E. *Cape Negro* has been so called from its dark colour, and is of moderate height.

On this part of the coast, not only is the bottom generally rocky, but many anchors have been lost. It is, therefore, hazardous to attempt anchoring here, even in summer; and, in winter the loss of every vessel making such an attempt may be expected.

We now arrive at the Point and Port of *Albufera*, or *La Bufera*: the latter a shallow and inconsiderable inlet. To the northward of its entrance is the *Isla Colon*, so called from the quantity of wild doves or pigeons frequenting it. This islet is elevated toward the north, declining to the south. Its extent is only three-quarters of a mile, and the channel within it is too narrow for any but fishing-barks. About its eastern and southern points are some rocks above water, and a sunken rock, of 11 feet, lies without, at the distance of about a cable's length.

Cape Favaritch, the N.E. Cape of Minorca, in latitude 39° 59½′, is low at the outer point, and, when seen at the distance of three leagues, appears like three islands.

PORT or HAVEN of FORNELLS.—This is the only harbour of importance on the north side of Minorca. Its entrance lies between *Cape Fornells*, on the west, and Cape Morteret on the east. The harbour is land-locked, sheltered on every side, and capable of containing many ships, of every class. The entrance is narrow, but its depth is from 15 to 18 fathoms. In taking the harbour, every danger may be seen, as there is none under water. The North winds blow directly in here, and if a vessel enters even with the wind at North or N.E., it will be necessary to carry a press of sail, in order to have way enough to run, without tacking or otherwise working the ship, through different gusts of wind which may be found, sometimes foul and sometimes fair, abreast of the high point of *Mola*: beyond this the wind is much more steady.

The entrance may be known by a small tower standing on the eastern point of the harbour. A little within the western point is a fort with four bastions. On coming from the S.E. with an intention of entering, you may range along the eastern point at discretion, and you will thus see the harbour's mouth and the fort above mentioned. The usual anchorage

anchorage for men of war is off the fort on the western shore, where also stands the town of *Fornells*, in from 7 to 11 fathoms, mooring East and West. You may also anchor within a cannon-shot of the fort, in from 4 to 6 fathoms, on mud and weeds. There is a depth of 7 fathoms, as high as the islands which lie on the eastern side, which side has rocky bottom. In the harbour are also several dangerous shoals, so that it is requisite to all who are unacquainted with it to have a pilot.

At half a mile to the westward from Cape Fornells is CAPE ANFOS, a point from which the coast trends to the southward, and forms the eastern side of a bay, which terminates at Cape Levante, and contains several small inlets.

FROM CAPE MORTERET the bearing and distance to *Cape Levante* are N.W. [*N.W. by W.* ½ *W.*] 2 miles; and, at a little farther, in the same direction, is *Cape Caballeria* or *Naucelles*, which, toward the sea, is projecting, high, and steep; but within the cape the land inclines downward, so that, at a distance, either from east or west, the cape appears like an island.

At a mile to the westward from Cape Caballeria is *Porros*, or *Sanitge* Island, the north side of which is of moderate height, but the south very low. The passage between it and the cape has many rocks, both above and under water, and can be used in small vessels only, by those well acquainted with it.

PORT SANITGE is a small harbour, three-quarters of a mile to the South [*S.S.E.*] of the isle above noticed: it is a cove which will admit vessels of a middling size, and which may here lie sheltered from all winds, by mooring head and stern, abreast of a precipice and cave on the western shore, in 3½ fathoms. The mouth of this harbour is from 1½ to 2 cables in breadth, and the depth inland about half a mile. In proceeding, the Isle Sanitge is left on the larboard side, and a large rock above water, which lies at a cable's length from the west point of the harbour, is to be left on the starboard. A vessel may take the ground without injury, the bottom being entirely of soft mud.

An islet, named BLEDA, similar in extent to Porros or Sanitge, lies at the distance of half a league from the latter, nearly West [*W.S.W.*] It is high, and there is a pass between it and *Cape Salayro*, but fit for small coasters only. The two isles, Porros and Bleda, mark the two sides of an extensive sandy bay, which has in it several unimportant inlets.

To the N.W. by W. [*W. by N.*] one mile and a third from Bleda is the *Cliff of Antichristo*, a lofty and precipitous portion of coast; and, at a mile and three-quarters from this, in the same direction, is a broad point, called *Falconera del Farinet*. From Falconera to *Cape Grosso* the bearing continues as above, and the distance is one mile and a third: in the middle of the coast between are the cove and fort of *Tauler*.

FROM CAPE GROSSO to the next prominence, the Point of *Fray Bernardo*, the bearing and distance are N.W. by W. ½ W. [*W.* ½ *N.*] 2 miles: between these headlands is *Punta Roxa* (Red Point). Between Punta Roxa and Cape Grosso is a small sandy cove, named *Cala Carbo*: and, at about a quarter of a mile from Punta Roxa, to the West, is *Punta Fontanellas*, on the eastern side of the entrance of a small river, which extends up the country to the S.S.E. [*S.E.*] 3 miles.

Here it is to be noticed that no part of the north coast of Minorca is fit for anchorage; the water being very deep, while the most prevalent wind is from the North, which causes a very heavy sea toward shore.

The WEST COAST.—*Cape Minorca* or *Bayoli*, the westernmost point of Minorca, may be known by the watch-tower on its summit. From the tower, the land, in its descent, seems to form two steps. The cape is of no great height, but is steep toward the sea. The depth of water near it is 18 fathoms, with good holding ground.

At a mile and a half from Cape Minorca, S. by W. ½ W. [*S.* ½ *E.*], is *Cape den Banicous*: the coast between is low, but steep-to. At the same distance S.E. by E. ½ E. [*E. by S.*] from the cape is the mouth of the haven of CIUDADELLA.

CIUDADELLA.—CIUDADELLA ranks as the capital of Minorca, but its haven is a small creek, so narrow that a brig, in good weather, has hardly room to tack in it. It extends inward to the N.E. and E.N.E. The depth at the mouth is 6 fathoms, but it decreases gradually to half way up, where it is only 11 feet, all sand and gravel. With the wind from the West or South, a heavy swell sets into the mouth of the haven, and, even higher up, such winds produce a strong run in the water up and down, which strains

the anchors and cables severely. When the wind does not prevail from the S.W. quarter, vessels may come-to safely, without the entrance, in any depth less than 18 fathoms, the ground being every where good. The haven may be readily known by the sight of the town of Ciudadella, and the chapel of St. Nicolas, having a battery, which is situate on the south point of the haven: for this point vessels entering should steer, and run close under it, on the starboard side, the point being perfectly clean.

From the haven of Ciudadella, the coast trends nearly S.S.W. [*South*] 2 miles. It is low, but steep-to, and broken by three insignificant coves, open to winds from the S.W., which bring in a heavy sea. The coast hence trends to the S.W. [*S.S.W.*], one mile and a half, to *Point Negra*, which projects but a little to the westward. Hence to *Cape Dartuch*, the S.W. point of Minorca, the bearing of the coast is S.S.W. ½ W. [*S. by W.*] one mile and a quarter.

SOUTH COAST.—CAPE DARTUCH is so low and flat, that, on approaching to it in a boat, a man may easily jump ashore; it is however, clean and steep, the depth at two cables out being from 16 to 18 fathoms, and this is equal to what is found all the way hence to the entrance of Ciudadella, at the same distance from land.

From Cape Dartuch eastward, to a point distinguished by the watch-tower of Dartuch, which bears from the Cape nearly S.E. by E. [*E. by S.*] 4 miles, the coast becomes more elevated, and is variegated by several little coves and points. Close to the watch-tower is a rock above water, and here is the highest land of this portion of coast, which appears partly of a white, and partly of a red, colour.

Punta Prima is a mile and a quarter to the westward of the watch-tower of Dartuch; and, at S.E. ½ S. [*S. 70½° E.*] from Cape Dartuch, and at S.S.W. ½ W. [*S. 5° W.*] half a mile from Point Prima, is a shoal, on which the water breaks when there is a heavy sea.

ST. GALDANA COVE.—At S. by E. ½ E. [*E. by S.*] a mile and three-quarters from the watch-tower of Dartuch, is a projecting point, which forms the western side of the entrance of the *Cala de Santa Galdana*, the most capacious inlet on the southern coast of Minorca. This cove is capable of receiving vessels of middling burthen, which may here lie sheltered from all winds but those from the West. It is, however, to be noted that, with westerly winds, several vessels have been lost here, from the heavy sea then rolling in at the mouth of the cove. From the mouth the harbour bends eastward to the spot in which vessels usually lie, where the depth is 3½ fathoms, on a sandy bottom. Inward the water gradually shoalens.

From St. Galdana Cove, *eastward*, the coast declines in height; and, in a distance of 9½ miles S.E. ½ S. [*S.E. by E. ½ E.*] where stand the *Peñas* or *Cliffs of Alayor*, it is varied by several spots of beach. The name of Alayor distinguishes a part of the shore which appears of a red colour, lofty, and steep, and having a tower on the summit. From these cliffs eastward the shore again declines in height: but it is steep-to. Between Sta. Galdana and Alayor are several insignificant coves and two islets, which require no further notice.

At 5½ miles to the S.E. by S. [*S.E. by E.*] from the watch-tower of Alayor is a projecting point called *Cabo del Fonts*: between are six coves, visited by fishing-vessels only. To the eastward of Cape del Fonts are two other coves, frequented only by small coasters. At 2½ miles to the south-eastward from Cape del Fonts is the S.W. point of the cove of *Bini Beca*, having two rocks before it, and of no more consequence than those to the westward. The point is situated S. by W. ½ W. [*S. 33½° W.*] one mile from the *Atalaya*, or watch-tower, called the *Great Tower of Bini Beca*, upon which signals are made of all vessels appearing to the southward of the island; and these are answered by the signal-tower above the arsenal at Mahon.

With the watch-tower of Bini Beca bearing nearly N. by E. [*N. 60° W.*] and at about two cables out from the shore, lies a shoal called the *Caracol*, which is about thrice the length of a ship's launch. At low water it appears above the surface, but is at all other times covered, and the sea mostly breaks over it. At one-third of a cable to the south of the shoal, the depth is more than 7 fathoms, sea-weed on the bottom; and in the passage between the shoal the depths are from 3½ to 4½ fathoms.

ANCHORAGES.—Off the whole of the Southern Coast of Minorca, between Cape Dartuch and the Bay of Bini Beca, there is good anchorage during northerly winds, in from 16 to 18 fathoms. For taking it, observe that the *summit* of Mount Toro, which is near

near the middle of the island, must be kept in sight over the land of the coast: for if the mount be entirely hidden by the southern land, or if too great a part be visible, the vessel will be over rocky ground.

To the eastward of Bini Beca is a cove, called *Bini Aucolla*, having near it a rocky islet. The land between is low, but it again rises a little, under the name of *Esquexos*, as far as the point of *Cova de Corps*, the S.W. point of Minorca. The roadstead of *Esquexos* is an excellent place of retreat during winds from N.W. to N.E., all along from the point of Bini Beca to the west part of the *Isla de Ayre*, on the S.E. The depths are from 14 to 22 fathoms, sandy bottom, not far from the land, and taking care not to approach too near the Caracol shoal, which has been described. The best spot in the road is to the S.E. of the shoal, and westward of the Isle Ayre, with the tower of Alayor over the top of Cape del Fonts.

At half a mile to the eastward from Point Cova de Corps is *Punta Algaret*: between is a cove called *Ensenada de Arenas*, or Sandy Cove. The two points form the narrowest part of the channel between Minorca and the Isle Ayre.

AYRE ISLE.—This little isle, which lies at the distance of nearly a mile from the S.E. end of Minorca, is three-quarters of a mile in length. Its N.W. part is low and flat, but the S.E. is more elevated, and so steep-to that a vessel may almost venture to graze the rocks. In passing through the strait between this isle and Minorca, vessels of burthen should keep in mid-channel, where the greatest depth is about 6½ fathoms, diminishing regularly to 2½ at the distance of a cable from either shore.

FROM the FREO or STRAIT between the ISLE AYRE and MINORCA there is no place of retreat that can be recommended to a stranger. The *Cala Delcaufa*, which is about a mile and a half to the north-eastward of Point Algaret, is occasionally a place of retreat for small coasters, behind an islet in the entrance; but even there so strong is the swell of the sea, when it advances from the northward, that the strongest cables and anchors cannot long resist its violence. All winds from the N.E. or N.W. quarters cause a considerable swell, but the true North alone is the most dangerous on the coast; and from this wind shelter in the cove may be found. At about half a mile to the north-eastward from Delcaufa Cove is *Point Prima*, whence a ledge of rocks extends to thrice the length of a long-boat. At nearly a mile to the northward of Point Prima is the *Punta del Islotes*, from which a reef extends to about half the length of a ship's launch. The whole of this coast, between the strait and Port Mahon, is so clean, with the exception of the Points Prima and Islets, that vessels of every class may advance as near to it as can be requisite. The tides, as already noticed, are irregular, rising or falling a foot or two, as the weather may be calm or rough.

IV. *The* COAST *of* FRANCE *from* CAPE SERVERA *to the* RIVER VAR.

GEODETIC POSITIONS.	Latitude.			Longitude E.		
Cape Bearn; Lighthouse	40°	30′	45″	3°	7′	22″
Port Vendre; Harbour Light	42	31	25	3	6	52
Perpignan	42	41	42	2	54	15
Fort Leucate	42	55	0	3	5	0
Narbonne	43	11	11	3	0	21
Agde; Harbour Light	43	16	45	3	26	52
Cette; Lighthouse on the Mole	43	23	45	3	42	22
MONTPELLIER; Observatory	43	36	16	3	52	46
Aiguesmortes; Lighthouse on the Mole	43	32	0	4	8	0
Great Mouth of the Rhone	43	20	30	4	51	30
Arles	43	40	31	4	37	47
Cape Couronne	43	19	0	5	2	0
MARSEILLE; Observatory	43	17	49	5	22	15
Cassis	43	12	15	5	33	0
Cape Sicio; Guard House	43	3	6	5	50	15
Toulon	43	7	9	5	55	41
Hyeres; Titan Isle, East Point Light	43	2	30	6	30	12

Cape

GEODETIC POSITIONS.	Latitude.				Longitude E.		
Cape Taillat	43°	8′	0″	..	6°	39′	0″
Cape Lardier	43	11	50	..	6	41	52
Frejus	43	25	52	..	6	44	9
Cannes	43	38	31	..	7	0	55
Antibes; Light-tower of Garoupe	43	33	51	..	7	8	6
——— Harbour Light	43	35	10	..	7	7	53

CAPE SERVERA, as already shown, is 9 miles N. by W. ½ W. [*N. 37° W.*] from Cape Creux. To the northward of the cape, at about 500 fathoms from shore, there is said to be a sunken rock, having over it only 5 feet of water. At about a league and a half to the northward from Cape Servera is the entrance of the little inlet named PORT VENDRE, having a small town, situate at the foot of the mountains. This place may be known by a great rock above water, at 30 or 40 fathoms from the south point of the entrance. On the starboard, or north side, is a small fort, in which is a square light-house, exhibiting a fixed light, at the height of 108 feet, and which may be seen at the distance of three leagues.

Port Vendre is about 400 fathoms deep, and, in some places, 100 fathoms wide: its entrance is between the light-house point and the rock above mentioned, where there is a depth of 9 fathoms. The best anchorage is in 3 or 4 fathoms, off a stone redoubt on the larboard side. From this spot the water quickly shoalens. Good water may be obtained from behind a fortification, at the bottom of the port.

On MOUNT BEARN, at about 875 yards to the S.E. of the entrance of Port Vendre, is a light-tower, with a fixed light of the first class, elevated 722 feet above the level of the sea, and which may be seen at the distance of seven leagues.

COLLIOURE.—Nearly a league to the north-westward of Port Vendre is the town of *Collioure*, which is situate on the sea-side, in a bay, at the foot of a rising ground, on which stands *Fort Mirdor*. In the bottom of the bay, to the westward, stands a castle on a point of rocks; and, to the S.W., at the bottom of a sandy creek, are several fishermen's houses, and an old tower in ruins, not far from which is a building, once a monastery. Farther inland may hence be seen the *Fort of St. Elme*, on a hill, which defends both Port Vendre and Collioure. Off the north point of Collioure is an islet, with a chapel on it, between which and the land is a passage for boats. Collioure is now frequented by small craft only, which ride safely with westerly winds, but quite exposed to East, and N.E. winds, which produce a great sea.

At the distance of nearly 8 leagues N. by E. ½ E. [*North*] from Collioure is CAPE LEUCATE, a point of moderate height, and level on the summit: upon it are a watch-tower and redoubt. The intermediate coast is low and sandy, and the land within is an extensive plain. On this plain may be seen the town of PERPIGNAN, which stands on the south bank of the *River Teta or Tet*, at the distance of 13 miles, to the north-westward, from Collioure. Between Collioure and Perpignan are the towns of *Elne* and *St. Nazaire*; and, at about 3 leagues to the northward of Perpignan, on an eminence, stands the *Castle of Salces*.

At the entrance of the River Teta or Tet, on its south bank, stands the *Tour de Canet*; and, at nearly 5 miles to the northward of this is the south end of the Pond or Lake of Leucate, which has several entrances between the islands that form it. Near the north end of this lake, within the cape of the same name, is the town of *Leucate*.

PORT of NARBONNE.—At about 2 leagues to the North [*N. by W. ½ W.*] from Cape Leucate is the fixed harbour light of *La Nouvelle*, on the south side of the entrance into the Port of Narbonne. It stands on the jetty, and in entering is to be left on the larboard side. The light is elevated 36 feet, and may be seen 3 leagues off. Between this and Cape Leucate is the inlet called the *Grau de la Franque*, off which small vessels may anchor, in 5 or 6 fathoms of water, fine sandy bottom, at a mile and a half from shore; but this, like the other parts of the coast, is dangerous with easterly winds.

The CITY of NARBONNE is situated on a river of the same name, at 10 miles to the northward from the entrance of the port. It was formerly a place of consequence, but is now neither rich nor commercial, nor populous in proportion to its extent; the inhabitants being estimated at not more than 15,000.

CAPE ST. PIERRE, the north point of what may be considered as the Bay of Narbonne, is about 14 miles N.E. by N. [*N. by E. ½ E.*] from Cape Leucate. This is a large head-land, stretching considerably to seaward. From this cape to that of AGDE, the bearing and distance

distance are E.N.E. ½ E. [*N.E. by E.*] 5¼ leagues. The land between forms a large bight, broken by several inlets. The land of St. Pierre is of moderate height, and thence declines toward Agde. To the westward of Cape Agde is the town of that name, the harbour of which is nearly choked up with sand.

AGDE.—Upon the extremity of the eastern jetty, at the entrance to Agde, is a *fixed* harbour-light, elevated 29½ feet, and which may be seen at 2½ leagues off.

The fort of *Brescou* is about a league to the eastward of the River Agde: it stands on a flat rock, surrounded by the sea, at about 5 or 6 cables' length from the shore. Northward of this fort, at the foot of Mount Agde, is a heap of stones, about 150 fathoms in length, called the Mole of Agde; and close by it are some fishermen's houses. At about half-way between the mole-head and Fort Brescou is a sunken rock, of only 4 feet, and 20 feet close to it: there are, also, several rocks at a full cable's length without the fort. Vessels may anchor near the *Conque Rocks*, close to the mole, on the eastern side, in from 16 to 20 feet of water; but care must be taken not to approach too near Fort Brescou, even in a small vessel. To anchor on the western side of the fort, you should enter near mid-channel, between the fort and the low land on the larboard side, where the depth is about 15 feet. Near the fort, in the proper anchorage, the water is deeper.

There is now a *fixed harbour-light* on the S.E. bastion of Fort Brescou, at a league E.S.E. *true* from the mouth of the Herault, in latitude 43° 15′ 30″, longitude 3° 30′ 7″ E. Its elevation is 59 feet, and it may be seen at the distance of three leagues.

Light of Mont d'Agde.—There is also a tower and light of the first class on the Mont d'Agde, or St. Loup, at 3¼ miles, N. 66½° E. true, from the mouth of the Herault, in latitude 43° 17′ 50″, longitude 3° 29′ 37″ E. The light is intermittent, showing a flash once in a minute, and does not disappear, in ordinary weather, within the distance of three leagues. It is 413 feet above the level of the sea, and the flashes may be seen when nine leagues off.

CETTE, a small trading town at the entrance of the *Canal of Languedoc*, now called the *Royal Canal*, is the port-town of Montpellier. This place may be known by a round mountain over the town, resembling that of Agde, and which, at a distance, appears like an island. The shore between Agde and Cette is low and sandy. On the top of Mount Cette is an old hermitage, with some ruins of fortifications. The town and port of Cette are on the eastern side of the mountain, and a mole extends out to the eastward, about 280 fathoms, on the end of which are a battery and a light-tower. This tower, on the Fort St. Louis, exhibits a *fixed light*, elevated 82 feet, and which may be seen at 8½ leagues off. It stands on the left or western side of the entrance.

To the north-eastward of the mole is a long heap of stones, or jetty of rock, which serves as a breakwater, off the middle of the harbour, and forms two entrances thereto. To the northward of this jetty is the old mole, a similar heap of stones or rock extending from shore. The mole extends nearly true West from the lighthouse to the entrance of the Royal Canal, which, at about 230 fathoms up, has a drawbridge over it.

To sail into the harbour of Cette, by the S.W. entrance, you should pass within half a ship's length of the mole-head, the deepest water being at about that distance from it. You may anchor within, alongside the mole, and moor with your prow to the eastward, having an anchor to the N.E., and a cable fast to the mole; or you may proceed to the bottom of the harbour, and lie in from 12 to 16 feet of water, on oaze and sand. The N.E. mouth of the entrance is shoal; but near the lighthouse or mole-head the depth is from 18 to 20 feet. At a short distance without the harbour is a shelf of sand, with only 3 fathoms over it, when the sea runs very high, with the winds from E.S.E. to S.W., which blow on this coast, and so obscures it with haze, that you cannot see the land until you are very near it. Good water may be obtained in the harbour.

At 809 yards to the westward of the light-tower on the Mole-head, upon a sea-mark near the Fort Richelieu, are now two lantern lights, seen at a league and a half, and which, in a line with the tower on the mole-head lead in mid-channel of the N.E. passage into the harbour. The lights have been established since 1831, but the directions for entering, as shown beneath,* are still to be attended to.

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* A notice, officially issued from the Chamber of Commerce, Marseille, 23rd Nov. 1831, previous to the establishment of the present lights, directs—

"Navigators to take notice, that, in order to facilitate the *entrance of the Port of Cette by the north-east*

The town of Cette is situate on a long and narrow peninsula, or tongue of land, extending south-westward to within a league of Agde, there being a Lagoon between it and the main land. The coast to the N.E., for nearly 8 leagues from Cette, is formed in a similar manner, but it is broken into islands, and a great part is nearly level with the sea.

AIGUES-MORTES.—The town of AIGUES-MORTES (pronounced '*eg-mort*') is situated on the low land, upon the edge of a salt-pond, at 25 miles from Cette. There are several shoal banks hereabout, which render anchoring dangerous, especially with southerly winds.

On the mole of *Aigues-mortes*, N.W. from the *Grau du Roi*, at 558 feet from its extremity, and on the left side of the entrance, there is exhibited a *fixed* light, varied by *a brilliant flash once in every four minutes*. Its height is 60 feet, and it may be seen when 4 leagues off.

GULF of LYON.—On crossing the GULF of LYON, from West to East, or toward Marseille, &c. with the wind to the southward, it is requisite to give a good offing to the northern shores, and to approach with great caution, because the *current, with southerly winds*, at times sets strongly to the North and N.W., and many vessels have been carried by it into the bight of Aigues-mortes, where they have been wrecked. Between the cape of Agde and Marseille, with the winds in the southern quarter, and it happens to be night or foggy weather, you must have frequent recourse to your lead: if, at the distance of 2 or 3 leagues from land, you find ground at between 30 and 40 fathoms, tack immediately toward the S.W. or Pyrenean coast, for along that coast the stream runs southward along the land.

TIDES.—The old French Pilot, '*Flambeau de la Mer*,' notices, as remarkable, that the tides make the tour of the whole Gulf of Lyon, setting to the north along the Coast of Provence, *(Department of the Rhone,)* to the west, along the coast of Languedoc, *(Herault,)* and to the south, along the western or Pyrenean Coast; and when the wind is N.W. *(Maestro,)* the tides run quite the reverse: for along the western coast they set to the North, to the East along the Coast of Languedoc, and to the South and S.S.E. along the Coast of Provence, or Mouths of the Rhone, &c. What renders the coast the more dangerous, is the extreme lowness of the land, which cannot be seen more than 3 or 4 leagues off; although, in clear weather, the steeples and towers of towns and villages, farther inland, may be seen at a greater distance: you may, however, sail at discretion along these coasts with winds off shore.

MOUTHS of the RHONE, &c.—The first town, from the sea, upon the Rhone, is ARLES, which stands on the eastern bank, at 8 leagues from the entrance. This was, formerly, a city of considerable importance, the country around it being fertile, and producing corn, wine, manna, oil, and fruits, but subject to inundations. The river has two entrances, divided by an island, *La Camargue*, which projects outward to the S.E. *The S.W. entrance*, which admits small vessels only, may be known by some huts on its western side, and a signal-mast or beacon, to point out the shifting of the banks, &c.

On the western bank of this entrance, at 2 miles S.S.E. [*S.E.* ¼ *S.*] from the old tower of St. Genest, there is now a *fixed light*, which may be seen 5½ leagues off. This light is very useful to the coasters bound to Marseille, the port of which bears hence E.S.E. [*E.* ¼ *S.*] distant 10 leagues.

The S.E. or principal entrance of the Rhone, is nearly two leagues to the eastward of the

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north-east passage, the only one that should be attempted during the winter months, when the bad state of the weather prevents the local pilots from going out to vessels, that in the month of October, a sea-mark was erected near the foot of the mountain, a little to the south of Fort Richelieu. The building, in the form of a quadrangular pyramid, the height of which is about 60 metres (197 feet) above the level of the sea.

"In order to take the north-east passage during the day, it will be necessary to bring the light-house on Fort St. Louis on with the new building; and, by keeping them on with each other, they will lead in through the middle of the channel.

"Navigators should, nevertheless, guard against the current, which sets strongly to the south-west, when the winds have blown long from the north-east; and it will be best for ships arriving from the north-eastward, instead of following exactly the above directions, to keep the new light a sail's breadth open to the seaward of the light on Fort St. Louis.

"With the wind from the south-east, ships should keep the new light on with that of Fort St. Louis, taking care never to open them to the southward."

western

western entrance, in latitude 43° 20½′, and longitude 4° 51½′ E. It may be found by the tower of St. Louis, which stands on the north bank of the river, at about 3½ miles from the entrance, and may be seen much sooner than the land about it. On the eastern side of the entrance are some fishermen's huts, which, also, serve as marks. By this channel tartans and other small vessels go up to Arles. The sands at the entrance often shift, and no stranger can enter without a pilot.

FOZ.—The entrance of the HAVEN of MARTIGUES lies two leagues E.N.E. ¾ E. [*N.E. by E.*] from the great mouth of the Rhone, and between is the BAY of Foz: all the coast between is low; but there are two little hillocks near the bottom of the bay, on each of which is a wind-mill. The town of *Foz*, in the N.E. corner, stands likewise on an eminence. The village of *Bouc* is nearly 3 miles to the southward of Foz; and between these places, on a plain, may be seen some antient aqueducts, opposite to which, in case of necessity, you may anchor.

In the BAY of Foz, generally, there are gradual soundings of 20 to 10, 5, and 4, fathoms; the ground of mud. From the Rhone, after heavy rains, the white water may be seen on that of the sea, setting south-eastward, to the distance of 5 miles from the mouth of the river.

BOUC.—The HARBOUR of BOUC, in the port of Martigues, is about 3 miles to the southward of Foz: all the land about it is low, and the harbour appears large, but it is very shallow, except in the middle, where the depth is from 4 to 2½ fathoms, on mud and grass. The mouth is about 150 fathoms broad; on the south side is a fortress with a square tower, called the *Tower of Bouc*, which, being composed of white stone, may be seen a great way off. The north point of the entrance, called *La Languette*, is very low, and surrounded with rocks. At a little within the entrance, about 90 fathoms from La Languette, is a ledge of rocks, with 5 or 6 feet of water on them. It is called *Le Foucard*, and may be distinguished in rough weather, as then the sea always breaks over it. The best passage is to the southward of it; and, to sail in, run within a ship's length of the south point, and steer to the E.N.E. (by compass,) until you open the drawbridge of the castle to the eastward: then steer to the northward, with the village a little open on the larboard bow, and anchor with Languette Point bearing West. The S.W. wind, to which this place is much exposed, sometimes raises a great sea. Fresh water may be had at the town of Martigues, which is situate on the broken land, 2 miles to the eastward.

There is now a harbour-light on each side of the entrance of Bouc, each showing a *fixed* light. That on the mole-head, on the north side, is 52 feet in height, and may be seen 3 leagues off. That on the fort or castle, on the south side, is 98 feet in height, and may be seen at 3½ leagues.

Several banks, on the east of Bouc Harbour, form as many channels to Martigues; of these, the principal, through which the tartans pass, is the southernmost; on the end of it stands a house, by which it may be known. At the entrance of these channels are several weirs, *(Bordigues,)* for catching fish.

CAPE COURONNE, which is nearly 5 miles S. by E. from the Tower of Bouc, is smooth and low. The *Rogas*, a ledge of rocks and sand, with 5 or 6 feet over it, lies at the distance of a mile S.S.W. from the cape; and between this and the land are two other shoals, with less water. From Cape Couronne the mouth of the Rhone bears N.W. by W. ½ W. 8 miles.

BAY of MARSEILLE.—The great BAY or GULF of MARSEILLE is that which is formed between *Cape Couronne* and *Cape Croisette;* the latter bearing from the former S.E. ½ S. [*S.E. by E. ½ E.*] 14¾ miles. An approach to the Bay may be known by the distinction of its extreme points; Cape Croisette being of high land, and Cape Couronne low. On the top of the hill, half a league within Cape Croisette, is a semaphore. From the westward several high hills may also be seen; particularly, at from 10 to 13 leagues, a round mountain in the country, called the *Mountain of Aix*, the Mountains of *St. Baume;* and, to the eastward of Marseille, almost joining these, the Mountain of *St. Sery*, which appears like two sugar-loaves: beside these, you will soon see, to the southward of Cape Croisette, the *Isle de Riou*, which is of moderate height, and nearly 2 miles from the land.

PLANIER.—Without the line of the two capes, and with Cape Croisette bearing E. ½ S. [*E. by N.*] 5 miles, is the *Isle of Planier*, almost level with the water, but having a light-house on it, which may be seen afar off. Excepting the east side, this isle is surrounded with rocks, which spit out especially to the S.E. and S.W. A shoal of rocks, called the *Veyrun*,

Veyrun, having a depth of only 15 feet, lies S.E. ½ E. [*E.S.E. ½ E.*] nearly a mile from Planier; but it is the only danger hereabout.

The Lighthouse on Planier exhibits an intermittent light of the first class, and the eclipses succeed each other every half-minute. In ordinary weather those eclipses do not appear total until the distance is greater than 3 leagues. The elevation of the light is 131 feet, and its flashes may be seen more than 7 leagues off.

At 4½ miles from Planier, N.E. ¾ E. [*N.E. by N.*] is the S.W. end of the isle *Pomegue*, which is a mile and a quarter in length, nearly in the same direction. To the northward and eastward of this are the fortified Isles *Ratoneau* and *Chateau d'If*, both of which are within two miles of the Port of Marseille.

On the north coast of the Bay, at about half a mile to the eastward of Cape Couronne, is *Point Riche*, which extends out near half a mile, and is of moderate height. On the western side of this headland is a sandy bay, where there is anchorage with off-shore winds. At two-thirds of a mile to the northward of the point is the village of Couronne. *L'Aragnon*, a large flat rock above water, lies a mile and a half to the eastward of Point Roche, at a short distance from the shore.

CAPE MEJAN, another headland on the north coast, lies 8 miles to the eastward of Cape Couronne; and to the eastward of Cape Mejan is *Lerevigne*, an islet close to the land, and steep-to in 7 fathoms. In the bottom of the Bay, on the north coast, at 3 miles from Cape Mejan, is a broad whitish point, named *Corbiere*, with a battery on it, on the eastern side of which is the anchoring-place of *Etasque*, in which the best berth is within 3 or 4 cables' length of the coast, and not more; for here you avoid some loose stones, which are injurious to cables. The proper depth is from 12 to 20 fathoms, on mud and weeds.

It is to be observed that, eastward of the line between the anchorage last noticed and the light-house of the harbour of Marseille, there is no good anchoring ground, all the bottom thence toward shore being full of rocks. In the middle of the bay the bottom is of oaze, and the depths from 30 to 40 fathoms.

PORT OF MARSEILLE.—The isle *Chateau d'If*, already noticed, lies about one mile and two-thirds W. by S. [*S.W. by W. ¼ W.*] from the entrance of the harbour or port of Marseille. It is fortified on all sides, and has three towers. On the N.W. of this is *Ratoneau*, separated only by a narrow but deep channel. On the N.E. point of the latter is a battery, and off its west end is an islet or great rock, called *Tiboulen*. To the south of Ratoneau is the N.E. end of *Pomegue* or *St. Jean*, which has a round tower and some fortifications; and, upon the highest part of the island stands the tower of *St. Jean* or St. John. At *Point Pomegue*, which is to the southward of this tower, is a creek, formed by a little island almost contiguous, where vessels from the Levant sometimes perform quarantine: there are here from 3 to 6 fathoms of water, on muddy ground; but it is necessary to moor head and stern, with a good anchor to the eastward. There is anchorage in several places about *Ratoneau*, but the best is near the point of *Pomegue*, where the *tower* stands, and near also to a rock above water, which is opposite a sandy beach on *Ratoneau*, below the fort, where there are 3, 4, and 5, fathoms of water, on muddy bottom. Have a good anchor down to the S.E., and a good mooring toward *Ratoneau*, because the squalls from the N.W. come over the island with great violence. There is also a good anchorage between *Chateau d'If* and the eastern point of *Ratoneau*, against a creek of that island, in 3 or 4 fathoms of water, muddy ground.

Between *Chateau d'If* and the harbour of *Marseille*, and nearly in a direct line, are two rocks under water; the nearest to Chateau d'If is about 300 fathoms from it, has 3 feet of water on it, and is called *Sourdara*; the other is about 100 fathoms from it, in the same line, with one foot of water on it, and is called *Canouvier*: when you are directly upon the latter, the tower of *St. Jean* on Pomegue will appear between two towers of Chateau d'If; and, when you are over against it, the great Cape of Montredon will appear midway between the *Point of Daume* and the *first* island off it. The sea generally breaks over both these shoals; you may pass between them and *Chateau d'If* without danger, by keeping nearest the island, where there are from 9 to 12 fathoms, muddy bottom: you may also pass between the point of *Daume* and *Canouvier*, and range along the coast at discretion: this is the usual and best passage.

THE CITY OF MARSEILLE is now the second city of France, and boasts a population of about 120,000. Its inhabitants were formerly called *Massilienses*, now *Marseillois*. It is seated at the foot of a rocky mountain, next the sea, and is divided into the Old and New Town.

Town. The former is situate on an eminence, and consists of narrow crooked streets, with mean houses, but in the latter the streets are straight and broad, and adorned with handsome edifices. It contains a large arsenal, and a large armoury. The harbour lies nearly true East and West, and forms a basin 525 fathoms in length by 150 in breadth, on the S.E. side of which are docks for the gallies. The entrance of the harbour is only 40 fathoms broad: it is defended, on the south side, by a strong citadel, and on the north side by a fort. It has not sufficient depth for men of war; these, therefore, must anchor on the outside. The city affords no prospect from the sea; but the Fort *St. Jean*, with its high round tower, will lead directly to it.*

The citadel, which has four bastions, is called that of St. Nicholas: near this, a little farther back, on an eminence, is a fort called *Notre Dame de la Garde*. The *harbour* or *port* lies in the middle of the town, and is esteemed one of the safest and most convenient in the Mediterranean: it is covered by a large point, which defends it from the sea, and the harbour's mouth is between the two *citadels* above-mentioned, where stand three pillars, to which the chains are fastened; the entrance is toward Fort *St. Jean*, between the tower and one of the said pillars. In going in keep near mid-channel, by which you will avoid rocks that lie near the lighthouse point; as you turn round the lighthouse, to enter the harbour, keep a little nearer to the *tower* of *St. Jean* than to the pillars, on account of some stones which have fallen off: there are 15 or 16 feet in the entrance, but all over the harbour 15 and 20 feet, and on the outside 4 and 5 fathoms; in which depth ships may anchor if prevented getting in by an easterly wind, but it is not safe to remain there at night.

Since the month of July, 1837, two lights have distinguished the port of Marseille. The first, a *fixed* light, at the foot of the tower of St. Jean, to the left of the entrance of the port, at the height of 30 feet. The other, intermittent, at 62 feet, on the point called the Tête de More, (or Moor's Head,) between the cove de la Reserve, and that of the Pharo, on the right of the entrance. A flash every three minutes, seen at the distance of three leagues. In a S.E. direction the lights are masked by the mound of the tower.

S.W. [nearly *S.S.W.*] of *Marseille*, about one mile, is the low point of *Daume*, off which are two islets, with a fort on the outermost: E.S.E. of these islets is anchorage in 6 to 8 fathoms of water, on mud and weeds, and you may fasten a cable to the *island*: farther out, your anchors will be apt to come home with S.E. winds. To the southward of *Point Daume* is *Veaune Road* and *River*: and further on is the foul shore of *Montredon*: off which, in case of necessity, you may anchor in 18 or 20 fathoms of water: but there is no shelter from sea-winds. From *Point Daume* to *Cape Croisette* is about 4 miles: at the point of *Cape Croisette*, which is low, is a high and steep island, called *De Maire*, near to which, at the N.W., is a smaller one, called *Tiboulen*: small vessels may pass between them in 7 or 8 fathoms, by keeping nearest to *Tiboulen*, in order to avoid a sunken rock near *De Maire*. At rather more than a mile from the *Isle de Maire* is that of *Jaire*, which is of moderate height, and about a cannon-shot distant from the coast: between which and Jaire are 7 fathoms of water; between Jaire and Maire are 20 fathoms. The *Isle de Riou* is about three-quarters of a mile S.S.E. from Jaire: it is a mile long from West to East, and generally steep-to; but a reef stretches from its western end, which has one small rock above water. On the summit is a watch-tower. To the northward of Riou is a smaller isle, *Calescraigne*, which is flat, and a shoal lies to the southward of it. To the south-eastward of Calescraigne are two rocks above water, *les Congloues*; at the west end of Riou is another, *la Mayade*; and on the S.E. side of the same are two others, called the *Emperors*. The variation, as found in the observatory of Marseille, 16th August, 1815, was 19° 50′ W., and it is nearly the same at the present time.

Remarks *and* Directions *for* Marseille, *by* Mr. Wm. Smith, R.N.

"The danger to be avoided, on sailing into Marseille Bay, from the S.E., is the *Veyrun*, a reef of rocks, with 15 feet of water upon them, lying one mile E.S.E. from *Planier Island*. This island is very low, and must not be approached within a mile on the S.W., South, and S.E. sides, because rocks stretch from it in these directions. The islands Pomegue, Ratcneau, Chateau d'If, &c. are all bold-to, and may be approached to the distance of a cable's length all round. There is a passage between Chateau d'If and Point Daume; but nearly

* Steam Packets now run regularly between Marseille and Naples, touching at Genoa, Leghorn, and Civita Vecchia.

in mid-channel are two rocks under water, the westernmost of which has about 3 feet on it, and on the easternmost the sea generally breaks: they lie with the Tower on the Island of Pomegue, in a line with the tower on Chateau d'If, and may be avoided by keeping either close to Chateau d'If or to Point Daume. *Between the latter and the rocks is the passage generally made use of*, and there is in it from 10 to 6 fathoms of water.

" *To anchor in the Bay*, before the town of Marseille, bring the lighthouse or tower of St. Jean, which stands on the larboard side of the entrance into the harbour, to bear from S.S.E. to S.E. by S., and the Island Chateau d'If S.W. or S.W. by W. in from 18 to 15 fathoms of water, sand and mud. Moor with an open hawse to the W.N.W., as N.W. winds, which are the most prevalent, and the strongest that blow here, send a very heavy sea into the bay. The best anchorage is said (by the pilots) to be in Veaune Road, where you may anchor in from 10 to 15 fathoms of water, quite sheltered from the N.W. winds, but open to the S.W. and W.: there is no tide, but a small rise and fall of water, occasioned by the winds. Wood may be purchased at the town, and water may be got at different places in the harbour, and also in Veaune Road from the river.

" Fresh beef and refreshments of all kinds may be obtained, very good and cheap. The entrance of the harbour is defended by a strong fort on each side, having together about 70 embrazures facing the sea. There is also an old castle, called *Notre Dame de la Garde*, which stands upon a hill to the southward of the city.

" *Notre Dame de la Garde* commands the town, but it is in a very ruinous state. There are castles and fortifications upon the Islands Pomegue, Ratoneau, and Chateau d'If; the latter has been very strong, but, at present, it and all the others are in a very bad state, and have very few guns mounted."

CASSIS.—From Cape Croisette to Cape L'Aigle the distance is about 12 miles, and the land between is generally high, with burnt cliffs. At 4 miles to the north-westward of Cape L'Aigle is the little town and port of Cassis: behind the town is a small castle, and before it a road, in which the depths are from 4 to 6 fathoms. At a mile and a quarter to the S.W. of Cassis is *Port Miou*, in which several small vessels may anchor, and be sheltered from all winds; the entrance of this harbour is narrow, and difficult to find until you are near it, when you may see a white chapel, which stands on its eastern point. To the S. by W. ¼ W. [*S.* ¼ *E.*] 4 miles from Cassis, lies *la Cassidaigne*, a dangerous cluster of sunken rocks having over them only 2 or 3 feet of water. From this reef the eastern end of the Isle Riou bears N.W. by W. [*W.N.W.* ¾ *W.*] 6¾ miles.

Eastward of Cape L'Aigle, at the distance of 300 fathoms, is the *Isle Verte* or Green Island, which is rather more than 300 fathoms long, from West to East, and of moderate height. In the passage between this isle and the shore, and rather nearer to the isle than the cape, is a rocky shoal, of only 6 feet of water, which will be avoided by keeping over toward the cape, where there are 8 and 10 fathoms.

LA CIOTAT.—At three-quarters of a mile to the northward of Cape L'Aigle is the town of *Ciotat*, which surrounds the north and west sides of a small but snug harbour, in which the depths are from 3½ to 2 fathoms. On the south side of the entrance is a mole, within which a few small vessels may lie sheltered from all winds. On the north point is a small fort, and about this point are some sunken rocks. Vessels going in should therefore run along by the head of the mole, in order to avoid the rocks. There is anchoring-ground at about 3 cables' length to the S.S.E. of the mole, in from 4 to 7 fathoms, but it is not safe to lie there at night. You may also anchor farther up the Gulf of Ciotat, to the northward, about a cannon-shot from a point, with two windmills on it, *(Little Cape St. Louis,)* in from 6 to 8 fathoms of water, on sandy ground. The country about *Ciotat* is noted for its delicious fruit, oil, and excellent wine.

On the fort, on the east side of the entrance to La Ciotat, is a *harbour-light, fixed*, which may be seen at the distance of 3½ leagues; its elevation being 82 feet above the level of the sea.

The Gulf or Bay of Ciotat is three miles broad, from *Cape L'Aigle* (Eagle Cape) on the west to *Cape Carboniere* on the east. It has soundings all over it, from 28 fathoms, decreasing to each shore, but the western side has the deepest water. At 3½ miles to the south-eastward from Cape Carboniere is the castle and town of Bandol: the castle stands upon a point of moderate height, and opposite to it is an islet, named *Rousse*, and a rock, *La Gritte*, more to the east. In the harbour formed by these there is anchorage, in from 7 to 3 fathoms.

CAPE

CAPE LA CRIDE (*C. Negre* of the old charts) lies three-quarters of a mile S.S.E. from Rousse or Bandol Isle. In proceeding to Bandol give the rock, la Gritte, a good berth on the larboard hand, but take care not to advance too near Cape la Cride, as a reef stretches from it. When you are opposite a large house standing on the sea-side, near Bandol Castle, you may anchor in from 5 to 7 fathoms, on mud and weeds. Between the castle and isle there is a depth for boats only.

BRUSC ROAD.—This road or bay is formed by Cape la Cride on the north, and the *Isle des Embiez*, with other isles, on the south. The distance between is about two miles, and it is nearly the same in depth. The summit of Embiez is distinguished by a round tower, having some houses on the land beneath it. Westward of Embiez is an islet named *le Ravilon*, which is surrounded by rocks, both above and under water, demanding great caution in those who sail in for the road. The best anchoring place is to the northward of the Isle des Embiez, in 5 or 6 fathoms, opposite a sandy shore, on which are some warehouses. The ground here is mud and grass, and holds so well that it is necessary to weigh the anchors frequently.

On the N.E. side of Brusc Road stands the village of Senary or St. Nazaire, on the western side of which is a small mole. The most troublesome winds in this bay are from the W.N.W. and N.W., but, as the ground is very good, they seldom produce mischief. Good water may be obtained at the bottom of the bay, or from the river at Senary.

CAPE SICIE, or LA VIEILLE GARDE, a bold and prominent headland, lies at the distance of one league to the south-eastward from the lower part of Brusc Road. The land between is high and bold; and upon it, at three-quarters of a mile N.W. from the extremity of the cape, is the chapel of *Notre Dame*. To the E.N.E. from the same point are two rocks above water, *les Freres*, or the *Brothers*: there is a passage between them and the coast, with 10 fathoms of water, but it is necessary to keep in the middle of it, there being a sunken rock near the point of the cape: there is another to the eastward of the Brothers, at the distance of about a cable and a half.

CAPE CEPET lies at the distance of 4 miles nearly East [*E.N.E.*] from Cape Sicie. This cape is the S.E. end of a peninsula, forming the south side of the Great or Outer Road of Toulon. The land between it and Cape Sicie forms a bay, of which both extremities are very high; but in the bottom is a sandy beach, forming a cove called *St. Elme's Road*, where vessels may anchor, in case of necessity, with off-shore winds.

At about a cable's length from the southernmost point of Cape Cepet, is a rock, *le Ruscas*, on which the sea generally breaks.

From Cape Cepet to the north point of the peninsula the distance is one mile and a quarter, and the coast is steep-to. At nearly a mile and a half westward from this north point is a small cove between two large points, called *St. George's Hollow;* off which there is anchorage in from 8 to 15 fathoms of water, on muddy ground. Men of-war and other large ships anchor farther off, to the northward, in the *Great Road*. Between the outer point and the point of *St. George's Hollow* there are several batteries, and a large infirmary, called the Hospital of St. Mandrier. At about three-quarters of a mile N.W. by N. [*N.W. ¼ W.*] from St. George's Point is a large round tower on the sea-side, fenced and fortified, called *Balaguier;* between is a bay, on the east side of which is a Lazaret or hospital; the land is very low near the sea-side, with sandy coves. In this bay *(Gulf of la Vechee)* ships perform quarantine. About one-third of a mile N. by W. from the tower of Balaguier, is the Tower or Fort of *Eguillette:* there is anchorage any where between these towers, in from 4 to 6 fathoms of water. At about three-quarters of a mile eastward of *Eguillette Fort* is another, standing on the opposite side, called *Grosse*, or the Great Tower, well fortified: between these is the entrance to the *Little Road*. *Grosse Tower* must not be approached nearer than a cable's length, because a flat, called the *Tasse*, stretches from it: there are also two other shoals lying off it, one of which, having 5 fathoms on it, bears nearly S.W. [*S.S.W.*] from the tower, distant about 400 fathoms; and the other, with 3½ fathoms on it, bears from the same nearly N.W. by N. [*N.W. by W.*] about 350 fathoms.

TOULON.—At three-quarters of a mile to the northward of Grosse Tower are the Harbour and City of Toulon, celebrated for its arsenal and fortifications. Its harbour is formed of two basins, in front of the town, on the south, and communicate with each other. The depth, near each entrance, is 4 fathoms.

To sail into the *Little* or *Inner Road*, which is opposite the port, it is necessary to give the

the *Grosse Tower* a berth of at least a cable's length, in order to avoid the *Tasse*, and then steer directly for the middle of the city, and you will carry from 8 to 6 fathoms of water, the ground mud and grass; in any part of which you may anchor, until you draw near the entrance of the harbour, where it shoalens fast. Men-of-war generally lie in one or other of the harbours, which are shut up every night with a chain.

Nearly 2 miles south-westward from the city of *Toulon*, at the bottom of the bay called the *Little Road*, on the sea-side, stands the large village of *Seine*, off which you may anchor with middling ships; but you must keep in mid-channel, there being very little water near the shore; however, near the village there are from 8 to 5 fathoms, muddy bottom. The wind that you are exposed to in the *Little Road* is W.N.W., and in the *Great Road* to the E.N.E.; the N.W. wind is also very violent there.

Remarks *on* Sailing *up to* Toulon, *by* Mr. Wm. Smith, R.N.

To sail into the Road of Toulon, give the south point of Cape Cépet a berth of two cables' length, in order to avoid a rock lying off it, under water, on which the sea generally breaks. After passing the cape, you may steer up the Great or Outer Road at pleasure; and with a beating wind, may stand from side to side, as close as you please, there being nothing to bring a ship up. To sail into the Inner Road, steer for Fort Eguillette until you bring the Two Brothers (near Cape Sicie) on, or a little open to the eastward of, the tower of Balaguier; thus you will avoid the *Tasse*, a shoal which stretches about W.N.W. from Grosse Tower, on the north side of the entrance. You may then steer for the centre of the city, and take up an anchorage in the Inner Road, in from 8 to 6 fathoms of water, soft muddy bottom, and good holding ground.

There is anchorage all over the Outer or Great Road, in from 16 to 6 fathoms of water, mud and clay bottom, good holding ground: the best is on the south side, abreast of St. George's Cove, in from 14 to 6 fathoms. Moor with an open hawse to the eastward. The N.W. winds are the most prevailing, and strongest that blow here; but there can never be much sea from that quarter.

Wood may be purchased at the town tolerably cheap. Water is also to be got at the town. Fresh beef, French wines, &c. to be obtained at a very reasonable price; the beef very good at from 5*d*. to 6*d*. per lb.

All the points in going into and round the roads, and also all the heights, are strongly fortified. The port is a place of very little trade, excepting what is brought to the dock-yard, and a little corn, &c. imported, just sufficient for the consumption of its inhabitants.

FROM TOULON EASTWARD.—At the distance of about 2¼ miles eastward from *Grosse Tower* is *Cape Brun*, on which stands a battery; and between are the Forts of *St. Louis*, *Malgue*, and *Vignettes*, which latter is a fortification nearly level with the water. From *Cape Brun* to *Cape Garonne* is about 2¼ miles, in a direction S.E. ¼ S. [*S.E. by E.* ¼ *E.*]; between them is the point and *castle* of *St. Marguerite*. From *Cape Garonne* to *Cape Escampebariou*, the bearing and distance are S.S.E. ¼ E. [*S.E.*] 4½ miles: between the two latter is a large bay, with a very low sandy isthmus, having a great lake in the middle, over which may be seen the shipping at anchor in the *Bay* of *Hyeres*. *Cape Escampebariou* is the S.W. extremity of the Peninsula of *Giens*: it is large, and very steep to the southward, and has a house upon it resembling a castle, with a small tower near it: it appears like an island both from the eastward and westward, in consequence of the low sandy land to the northward of it.

The *Fornigues of Escampebariou*, a cluster of rocks above water, with some under water near them, lie at the distance of a mile and a quarter from the cape of the same name, and bear from it nearly N.W. by N. [*N.W. by W.*] There are 26 fathoms of water close to them, and they lie about a mile from the nearest shore, which is also rocky, and should not be approached nearer than a quarter of a mile.

The distance from Cape Escampebariou *to* Cape Esterel, which is the easternmost point of the peninsula of Giens, is 3½ miles. Off the coast between lie the *Ribaud Isles*, of which the greater is less than half a mile in extent, in form of a quadrangle, and nearly half-way between the two capes. The *Little Ribaud* lies between this island and the main, from which it is divided by a channel, about 200 fathoms broad, having, in mid-channel, a depth of 3 or 4 fathoms, and through which small vessels frequently pass. Excepting for boats, there is no passage between Little Ribaud and the main.

BAY

BAY or ROAD of HYERES.—The Bay of Hyeres is formed by the land between *Cape Esterel* and *Cape Benat*, which bear from each other E. ¼ N. and W. ¼ S. [*E.N.E. and W.S.W.*] 9¼ miles. To the southward and S.E. lie the Islands of Hyeres, which are divided by several passes, and are celebrated for the great variety of medicinal plants which flourish upon them. The town of HYERES stands at the distance of 2 miles from the N.W. shore of the bay. It is situate on the S.E. side of a hill, in a delightful country, enjoying a perpetual spring, and surrounded by beautiful gardens, containing the finest fruits in the kingdom; for oranges, citrons, and pomegranates, grow in the open air. At 3 miles to the eastward of the town are extensive salt works, on the borders of a salt-lake. To the south of this is the Road, a very fine anchorage, having all over it a fine clear ground, and regular soundings, in from 15 to 3 fathoms: there are several good landing-places in the bay, and ships frequently come here to load with salt.

Close to Cape Esterel, called also *Point Badine*, is a rock above water: this point is moderately high, and you may anchor within a cannon-shot to the northward of it, in 5 or 6 fathoms of water, on sandy ground, with S.S.W. and West winds; but with easterly winds you should anchor farther northward, off *Gapeau River*, where there is a *redoubt*, and a little farther N.E. a *magazine* or warehouse. Off this warehouse is the best anchorage, in 4 or 5 fathoms of water, mud and grass; and at Gapeau River you may get good water; but men of war generally anchor about 2 miles off the warehouse, in 10 to 12 fathoms of water.

From *Cape Esterel* to the eastern part of the salt-ponds, called *Point Argentiere*, the coast is low, sandy, and marshy. About 5¼ miles S.E. by E. [*E.S.E. ¾ E.*] from the magazine or warehouse above-mentioned, is a little round island, with an old fort upon it, called *Bregançon;* to the north-westward of which small vessels may anchor, in case of necessity, in 3, 4, or 5, fathoms of water. The Bay of *Hyeres* is most exposed to the S.E. and S.W. winds, which causes a great sea, through the Great and Little Passes: and the N.W. winds are sometimes very violent there.

HYERES ISLANDS.—These are six in number; two of which, *Great* and *Little Ribaud*, have already been mentioned. The first next to these is *Porquerolle*, about 4 miles in length and one mile in breadth: its western end is about a mile and a third from *Great Ribaud I.*, forming the channel between them into *Hyeres Bay*, called the *Little Pass*, in which is from 8 to 18 fathoms of water. There are some rocks lying off the N.W. end of *Porquerolle*, which must be avoided: there is very good anchorage on its north side, opposite the castle, which is near the middle of the island. About 4 miles eastward from the east end of *Porquerolle* is the little *Island Bagueau;* the channel between these is called the *Great Pass*, and has no less than 20 fathoms of water in its shoalest part. *Bagueau* is nearly a mile in length from north to south, and close to its south end is the north-west point of *Portcros Island*, leaving a narrow passage called the Little Pass of *Bagueau*.

LIGHTHOUSE.—On the south side of Porquerolle is a Light-tower of the first class, 52 feet high above the ground, and 262 feet above the sea, in latitude 42° 59′ 7″, longitude 6° 12′ 37″. The light, situate between Cape d'Arme and Cape Roux, is intermittent, and shows a flash once in every four minutes. Short eclipses, which precede and follow every flash, do not appear total within the distance of three leagues. The steady light, which intervenes between the eclipses, lasts about 2¾ minutes.

Portcros is about 2¼ miles in length, and 1¼ mile in breadth, and has a castle about the middle of its north side: off its south point is a small rock above water, called *La Gubiniere*, and at the N.E. end of this island is a small anchoring-place, called the *Port* of *Man*, protected by a *fort* of the same name, which stands on the east end of the island. The *Isle du Levant*, or *Titan*, is the easternmost, and is about half a mile from *Portcros:* it is 4¼ miles in length, and lies 5 miles to the south-eastward of *Cape Benat*, forming with it the eastern channel to the *Bay* of *Hyeres*, called *Passe de Levant*. To the eastward of the east point of *Titan*, about one mile, is a rock above water, called *L'Esquilade;* it has several sunken rocks near it, which must be carefully avoided.

A LIGHT-HOUSE now distinguishes the eastern extremity of *Titan Isle*, in lat. 43° 2′ 30″, and long. 6° 30′ 12″, which displays a fixed light at 39 feet above the ground and 246 feet above the sea, seen at five leagues off.

Directions *for the* Roads *of* Hyeres, *by* Mr. Wm. Smith, R.N.

"To the Bay of Hyeres there are three channels or passes, all which are clear and safe. That between the island Porquerolle, on the south, and Great Ribaud Island and Cape Esterel, on the north, is called the *Little Pass*: it is about a mile wide, with from 24 to 7 fathoms of water in it. In sailing through this channel, give the S.W. point of Porquerolle a good berth, in order to avoid some rocks lying off it under water. With a leading wind steer through in mid-channel; with a beating wind, you may stand pretty close to either side, excepting the above-mentioned point. The other channels are large and clear, and without any danger. All the projecting points of land are strongly fortified; notwithstanding this a fleet or squadron may enter the bay, with a leading wind, through the Grand Pass, out of gun-shot.

"There is good anchorage in most parts of the bay, and room to anchor a number of ships out of gun-shot: the best is allowed to be on the north side of the bay, in from 12 to 10 fathoms of water, soft muddy bottom, with the salt-houses bearing North, and the Isle Bregançon from East to E.S.E. but it is exposed to the E.S.E. and South winds, which send in a very heavy sea.

"Water may be had at Gapeau River, a little to the westward of the salt-houses. The entrance is defended by a small redoubt, standing on the east side of the river."

HYERES BAY to FREJUS.—From Cape Benat E. ¼ S. [*E.N.E.* ½ *E.*] 4¼ leagues, is *Cape Taillat*. Cape Benat is very high and steep on all sides, and should not be approached nearer than a quarter of a mile, because some sunken rocks stretch off from it to a cable's length or more; there is, also, an islet near it, called *Cristau*. At E. by N. [*N.E. by E.* ¼ *E.*], one mile and two-thirds from Cape Benat, is a great rock above water named *La Fournigue*, which resembles a boat: it may be approached, without risk, to the distance of half a cable. At about half a mile W.N.W. ¼ W. [*West*] from *La Fournigue* is a spot of foul rocky ground, of 9 fathoms, with 27 fathoms close to it, and called *Seche de Gourron*.

Bormes Road is 2 miles to the northward from Cape Benat, and has good ground in from 6 to 10 fathoms, off a sandy beach, between *Point Gourdon* on the south, and *Cape Narveau* on the north; but it is unsafe with winds from and between S.E. and East, because they blow full in, and cause a great sea.

Nearly 8¼ miles E. ¼ N. [*N.E. by E.* ½ *E.*] from Cape Benat is Cape Cavalaire; and about half a mile farther on is a point of the same name, with a small round tower upon it, to the westward of which are some store-houses; but they cannot be seen until you enter *Cavalaire Road*, which is to the north-eastward of the point, where vessels may anchor in from 10 to 4 fathoms, sheltered from easterly and westerly winds, but quite open to the southward.

CAPE TAILLAT, in latitude 43° 8′, is 5¼ miles to the eastward from Point Cavalaire. This cape is the south-eastern extremity of a headland from which the south-western end is nearly 2 miles distant, and a slender bay is thus formed between the two points. From the N.E. point of the isle Titan to Cape Taillat, the course is E.N.E. [*N.E.* ¼ *E.*] and the distance 3 leagues: but a little to the eastward of this course, and about half way, is a sunken rock, which is very dangerous: therefore, in advancing from the eastward for Hyeres Bay, it is necessary to keep nearer to Cape Taillat than to the isle Titan, until you get to the westward of Cavalaire, after which you may proceed for the anchorage at pleasure.

Cape Taillet is a long point stretching into the sea, of a moderate height, with *Camaret Tower*, a watch-tower, on it; close to the east side of it are some rocks above water. The cape at a distance appears like an island, it being connected to the high land of the main by a neck of low sandy land.

CAPE LARDIER, a steep point, lies at the distance of 3¼ miles N.E. ¼ E. [*N.E. by N.*] from Cape Taillat. At the point of the cape is a little oval islet, without which are two rocks above water, like boats, and to the eastward of the outermost rock, about three cables, is a very dangerous sunken rock, to which a good berth should be given on passing.

On Cape Lardier is a light-tower, of the first class, 66 feet high, with intermittent light at 427 feet above the level of the sea. The flashes, in fine weather, may be seen when 8 or 9 leagues off, and the eclipses do not appear total within the distance of three leagues. When at 6 or 7 leagues distant the appearance of this light may be distinguished from that

on

on Planier (see page 56) by its flashes having an interval of one minute, while the other has only half a minute, as already explained.

It rarely happens that this light is seen by vessels advancing from the eastward before passing within sight of the Antibes light, which lies 30 miles to the N.E., or by those from the westward without previously seeing the Porquerolle or the Titan light, respectively at 25 and 13 miles distant. The old tower of Camaret stands on Cape Taillat, at three miles S. 27° W. *true*, from the lighthouse.

From Cape Lardier the *Point de la Moutte* bears nearly N.N.E. three miles. There is a slender bay between, that of *Pampalaune*, having a sandy shore, off which you may anchor in 5 or 6 fathoms, bottom of mud and sand; but it is quite open to, and unsafe with, easterly winds. From Point de la Moutte to the Cape of St. Tropez the distance in a N.E. direction, is one mile and three quarters; the two points being, in fact, two projections of the same great head-land. At about three-quarters of a mile from shore between the two capes, is a large rock under water, called the *Moutte*, to the northward of which is a ledge of rocks, above and under water, stretching off from Cape St. Tropez, half a league to the eastward, and which should not be approached nearer than to the depth of 8 fathoms.

GULF of GRIMAUD.—This Gulf is formed on the South by the land of St. Tropez: it is about 4½ miles deep and one wide. So soon as you have advanced to the northward so far as to have the gulf open, you will see the small tower of St. Tropez on a low point, on the east of which is a little bay, *Canoubiez*, in which small vessels may anchor, in from 6 to 7 fathoms of water, on mud and grass or weeds: but as here the N.W. winds blow with great violence, this spot is very unsafe.

Small vessels may also anchor at a little to the westward of the town, near the middle of the gulf, in from 6 to 10 fathoms of water. In sailing into the gulf, take care to avoid a reef of rocks, which lie off the north point of the entrance, and extend nearly half-way across it; these are called the *Sardineaux*; they should always be left on the starboard side, and there is no other danger.

There is a small mole at the town of St. Tropez; and, at a little above the town, on a rising ground, is a fortress, with some wind-mills near it.

From Cape St. Tropez to the Cape and Tower of *Alexandre* the bearing and distance are N.N.E. [*N. ¼ E.*] 4 miles; and from Cape Alexandre to *Cape St. Egou*, on nearly the same bearing, the distance is 3 miles. Cape St. Egou is the western point of the BAY OF FREJUS, and the distance hence to the eastern point of the same is 2½ miles. Two islets off the latter are called the *Lions*.

FREJUS, an antient town, stands at the distance of a mile from the northern shore of the gulf to which its name is imparted, and contains many monuments of its antient grandeur. On advancing to this place, you will see the town apparently near the middle of the bay, and, near it, to the south, a little river running into the sea. At half a league to the S.W. of the latter, is another small river, called that of *Argens*. Near the shore, at about a mile and three-quarters to the eastward of Frejus, stands the little village of *St. Raphael*; and between these places, at about a mile from the shore, is anchorage in from 10 to 7 fathoms.

At 3 miles eastward of the Lion Islets is the *Islet d'Or*, a rock close to the S.W. point of Agay Road; and nearly a mile to the north-eastward of the last is the west point, on which stands *Darmont Tower*: this point is high and steep, and, at a distance, appears reddish; but the east point of the entrance is low, and has the ruins of a tower on it: within the tower is a large house, with a small castle near it, on the sea-side. The usual place of anchorage is within the castle, on mud and weeds: fresh water may be obtained from a small rivulet at the bottom of the bay. The entrance is not half a mile across; and you must not approach the eastern point, whereon stand the ruins of a tower, nearer than a cable's length, as some rocks stretch from it, nearly to that distance. The wind to which vessels are exposed in this place is the S.S.E.; but the N.W. winds likewise blow with great violence.

At about one mile to the eastward of the entrance of Agay Road, is an islet, lying at about a musket-shot distance from shore: and close to the south side of this islet is a rock above water, called the *Vielle d'Agay*: about 100 fathoms south from this rock is another, like a tun, called the *Boutte*; and, at 110 fathoms farther south, is a ledge of rocks, with only 5 feet of water on them, on which the sea generally breaks.

CAPE

CAPE ROUX, a large mountain, steep on all sides, and covered with trees, lies two miles N.E. by E. ¼ E. [*N.E.* ¼ *N.*] from the Vielle d'Agay. It has some reddish spots on it, whence it derives its name; and about it is a bed of rocks, extending considerably to the N.E. and North.

The ISLES of ST. HONORAT and ST. MARGUERITE lie at the distance of six miles to the north-eastward of Cape Roux, and between is the entrance of the bay called the GULF of NAPOULE, the western side of which is a considerable head-land extending to the eastward. Of the latter, the southern extremity is *Point L'Aiguillon*, and the northern *Point L'Anguille*. The village of Napoule stands on the western side of the gulf, at a mile and a quarter N. by W. ¼ W. from Point L'Anguille; and there is good anchorage before it, near the land, in from 10 to 8 fathoms, where a vessel may lie well sheltered from winds from the S.W. to North, but quite exposed to all others. On the north side of Napoule is the little River Siage. On a cove, upon the N.E. side of the gulf, is the town of CANNES, whence the land trends to the south-eastward, nearly a mile and a half, and terminates in a low and narrow point, *Point la Croisette*, to the northward of the west end of St. Marguerite's Island. On the south point of Cannes, *Point St. Pierre*, stands a castle, and about it is a reef of rocks.

ISLES of St. MARGUERITE.—The Islands of St. Marguerite and St. Honorat are flat, and divided by a channel less than half a mile in breadth. On the south side of St. Honorat, the southern isle, near its middle, is a square tower, with some houses near it; and from the point on which this stands, a reef of rocks, called the *Monks (les Moines)* extends three-quarters of a mile to the southward. There is, also, at the eastern end of the same isle, another reef, called the *Picons*, and several rocks above water lie on the south side.

ST. MARGUERITE has twice the magnitude of Honorat, and is higher on the north side. On the north side of this island is a citadel, (notorious in the history of France as a prison,) under the protection of which, to the eastward, small vessels frequently anchor, in from 9 to 7 fathoms of water, on muddy ground, where they lie sheltered from westerly and southerly winds. At about a cable's length from the east end of St. Marguerite is an islet, *La Tradeliere*, and a sunken rock, which must be carefully avoided.*

LE GOURJEAN, or GULF of JOUAN.—This is a bay to the north-eastward of the island of St. Marguerite, the eastern point of which is the *Point l'Ilette*, and the western point *La Croisette*, already noticed. The distance between the two points of the main is 3½ miles. In the bay, or gulf, there is anchorage in almost every part. This road may easily be found by those coming from the westward, by means of the isles of St. Honorat and Marguerite; and by those coming from the eastward, by the promontory named *Cape Garoupe*, the point of which is nearly a mile to the eastward of Point l'Ilette. Near the middle of the entrance of La Gourjean, in the line of the two outer points, is a rock above water, appearing like a great boat, and called the *Boute of Gourjean*: both to the north and south of it are rocks nearly level with the water, on which the sea sometimes breaks. Excepting near these dangers, you may safely pass the Boute, in not less than 5 or 6 fathoms of water: in mid-channel, between it and Marguerite, the depth is not less than 28 fathoms; and this is the channel used by large ships. On the eastern side you may enter between the Boute and Point l'Ilette; but here you may not go near the point, as the bottom is rocky to the distance of more than a cable's length; there are two sand spots of only 4 fathoms, between these and La Boute; so that it is necessary for large ships which sail in this way to pass near the eastern side of the latter. Having passed the Boute, on either side, you may go and anchor in the bottom of the bay, opposite a great square tower, that of the port, *Gabellas*, in 5 or 6 fathoms, on sand and mud. Large ships anchor farther off the tower, and nearer the Boute, in deeper water.

The most inconvenient winds in this road are those from the South and S.E. With the wind at N.W., you may anchor farther westward, near *Foucade Point*, in 5 or 6 fathoms, with a hawser on shore; and, with easterly winds you may anchor under the N.E. shore, or Beach of *Pilon*, in 4 or 5 fathoms, bottom of mud and weeds, where, likewise, you may carry a hawser on shore. Good water may be procured near the tower of Gabellas, on the north shore, close by some houses standing there.

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* The isles, now St. Marguerite and St. Honorat, were antiently called *Lerinus* and *Lero*. Hence they are also called to this day *Isles de Lerins*.

LIGHT-

LIGHTHOUSE of GAROUPE.—At a mile to the northward of Cape Garoupe, and a mile and a half to the southward of the port of Antibes, there is now a fixed light of the first class, near the chapel of Notre Dame de la Garde, in latitude 43° 33′ 51″, and longitude 7° 8′ 6″ E. The light is elevated 82 feet above the level of the sea, and is visible, in fine weather, at the distance of seven leagues.

ANTIBES.—From the south point of Cape Garoupe to the town of ANTIBES, the distance North and South is two miles. On the summit of the high land between is a square tower and the chapel above mentioned. A few rocks lie at different spots off the shore, which require caution. To the south of Antibes is a small bay, with some landing-places, called the *Cove of Vacon*. Almost in the bottom of the bay is a rock above water; and off Point Negre, the S.E. point, at the distance of 180 fathoms, is another rock above water: there is good anchorage between these rocks, in 4 and 5 fathoms, on a bottom of mud and weeds: it is safe with South and S.W. winds, but northerly and easterly winds blow directly in.

ANTIBES is the easternmost of the sea-ports of France on the Mediterranean Sea. It is well fortified, and its harbour, which is on the north of the town, is formed by a mole to the east. This mole is founded on a rocky point, having on it a half-moon battery, for the defence of the harbour. Upon the promontory, on the opposite side of the entrance, is a square fort, called *Fort Quarré*. The harbour was formerly much deeper than it is at present, two-thirds of it being now filled up with sand, and the other part, within the mole, admits small vessels only. The breadth of the entrance between the mole-head and north shore is only 150 fathoms. The depths of water, within and near the mole, are from 15 to 18 feet. At about 100 fathoms N.E. [*N.N.E.*] from the point of the great bastion, which is on the middle of the mole, is a small ledge of rocks, with about one foot of water on them, and near them from 16 to 20 feet. You may pass between the mole and this ledge in from 20 to 25 feet of water, by keeping a little nearer to the half-moon battery than to the ledge: the safest way, however, is to pass to the eastward of the rock, and run in, at discretion, by the northern shore, on the height above which stands Fort Quarré: then steer for the port, and anchor in the bottom of the harbour along-side the mole, with your stern toward the town, where you may lie sheltered from all winds, and from the sea, although the E.N.E. wind blows full at the entrance. The N.W. wind is the only one which disturbs a vessel here, although it comes over the land, and precautions against it should be taken. It is difficult to run into this port with fresh easterly or S.E. winds, because the sea runs very high and hollow. Good water may be procured above the town, in a meadow, where there is a spring.

The HARBOUR LIGHT of ANTIBES is on the extremity of the eastern mole, to the left of the entrance. The tower, with intermittent light, stands in latitude 43° 35′ 10″, longitude 7° 7′ 53″ E. One flash, of four to five seconds, appears every two minutes, preceded and followed by short eclipses. Elevation, 49 feet; range of light, nearly 3½ leagues.

In approaching Antibes from the eastward, mariners will see the fixed light of *Villa Franca*, which stands on Point Mala, (as will be presently noticed,) and also the intermittent light at the entrance of the port of Antibes, at the same time as they see the fixed light of La Garoupe: but the last mentioned light alone will be seen by those approaching from the southward or south-westward, until they have rounded the peninsula.

FROM ANTIBES the coast trends to the N.E. two leagues, to the mouth of the RIVER VAR, which river separates France from Savoy. The coast between is a low sandy beach, off which, at the distance of a mile, on a bank, the *Granaglia*, the depths are 5 and 6 fathoms, but entirely exposed to the Levanters or easterly winds.

V. THE COASTS OF NICE AND GENOA, FROM *the* RIVER VAR *to* LA SPECIA *and* SARZANA.

We now arrive at those coasts which, by the last treaties of peace, have been consigned to the government of the King of Sardinia, and which include the once republic, but now grand duchy, of Genoa.

GEODETIC POSITIONS.	Latitude.	Longitude E.
NICE [*Nizza.*]	43° 41′ 25″ ..	7° 17′ 2″
Villa-franca; Lighthouse	43 40 0 ..	7 19 30

Geodetic Positions, *continued.*	Latitude.				Longitude E.		
Monaco	43°	40′	45″	..	7°	26′	5″
Cape St. Martin	43	43	30	..	7	32	20
Vintimiglia	43	45	0	..	7	42	30
San Remo	43	48	44	..	7	50	0
Porto Maurizio	43	55	0	..	7	59	30
Cape Oneglia	43	56	10	..	8	3	0
Cape del Melle	43	58	20	..	8	10	40
Albenga	44	4	0	..	8	12	25
Cape Noli	44	11	0	..	8	23	15
Vado	44	15	0	..	8	25	30
Savona	44	18	0	..	8	28	0
Genoa; Lighthouse	44	24	18	..	8	53	15
Porto Fino; the Cape	44	19	0	..	9	14	30
Sestri Levante	44	17	0	..	9	26	0
Moneglia	44	14	30	..	9	32	0
Levanto	44	10	30	..	9	38	0
Point de Mesco	44	8	30	..	9	39	15
Porto Venere	44	3	56	..	9	51	30
Isola Palmeria; centre	44	3	0	..	9	52	30
Islet Tino; Lighthouse (*Var.* 17½° *W.*)	44	1	45	..	9	52	30
Spezzia, or Spezia; the town	44	6	22	..	9	51	30

NICE and VILLA FRANCA.—The first port to the eastward of the Var is that of Nice, from which it is distant only 4 miles. At a mile and a half more to the east is Villa Franca, having a superior harbour, under shelter of a head-land, which is distinguished by a lighthouse. From Cape Garoupe, to the southward of Antibes, the bearing and distance to *Cape Meaux*, the western point of Villa Franca, are N.E. by E. ½ E. [*N.E.*] 4 leagues. On advancing, the town of Nice, seated on a plain by the sea-side, will be seen, as well as the lighthouse of Villa Franca, on an elevated situation, more to the east. A citadel, on a broad point, protects all the south side of the town; and to the east of this is the harbour, of which the entrance is to the S.E., and has, between the piers, 12 feet of water. There is no anchorage without. When a vessel approaches the harbour, and hoists her colours, the harbour-master, if requisite, orders a boat, manned from every vessel in port, to assist in towing, &c.; and, when a vessel is ready for sea, she is assisted in like manner.

The port is situated where there were formerly fine gardens. The mole is unhandsome, and often requires repair, on account of the violence of the surf, which disturbs the stone-work. The entrance is so small, that vessels of great burthen cannot enter; but small coasting vessels, feluccas, and open boats, are commonly to be seen here. On the side of the harbour are several good warehouses for the reception of merchandise. A handsome terrace supports and consolidates the banks, which oppose the inroads of the sea, and forms a delightful walk for the inhabitants, who have here an extensive view of the sea.

The Nissards, or people of Nice, are represented as, in general, mild, humane, peaceable, complaisant, and gay. The inhabitants of the country, though poor, are civil, and perfect strangers to the vices engendered by luxury, and to the violent passions which agitate the great. Poor, frugal, and industrious, they are commonly occupied in providing for the subsistence of their families, in cultivating their fields, or watching their flocks. The country has always a smiling aspect.

As Nice is open to the south, winds from that quarter are sensibly felt there. Its vicinity to the sea, and exposure to such winds, are the reasons that, in the summer months, the air which surrounds it is fresh and moist; for, as evaporation from the sea is constantly going on, the air which passes over an immense tract of water, like the Mediterranean, must be necessarily loaded to such a degree with aqueous particles, that the atmosphere, even to some extent from the coast, will be impregnated with them.

The most important vegetable productions of the country are the olive, lemon, and orange, trees. The first, in point of beauty, surpasses all. The laurel-rose, the palm, the vine, equally decorate the country. The commerce has lately been trifling: its exports consist of the chief productions of the country, such as oil, oranges, lemons, essences, &c. The imports are clothes, linen, hosiery, cutlery, spices, sugar, coffee, &c., with salt from the country westward. The beef of Nice is indifferent. The aromatic plants, however, with which

which the country abounds, render the mutton and game excellent. There are several manufactories of soap, paper, and leather, in the town. Liqueurs, wax and tallow candles, and perfumeries of all kinds, abound.

VILLA-FRANCA.—The harbour is spacious, deep, and has safe anchorage, but it is exposed to southerly winds. To the west it is sheltered by Mont-Alban, to the north by very high mountains, and to the east by a neck of land, covered with beautiful olive and every kind of fruit-trees. The light-house at the entrance is defended by several formidable batteries. The town is built in form of an amphitheatre, at the bottom of the harbour, and is a small decayed place. The bay is about a mile in depth, and, at the narrowest part, about one-third of a mile over. It may be readily known, on approaching from the westward, by the small square fort of Mont-Alban, which appears above the tower on the western point, and has a wind-mill near it. On advancing from the eastward, you will see the small fort of St. Ospicio, and the light-house on *Mala-Lingua* or *Point Mala*, which stretches far into the sea, and in the middle is very high.

The LIGHT-HOUSE now shows an intermittent light, at 223 feet above the level of the sea, in latitude 43° 40′, and longitude 7° 1′ 30″.* The flashes appear at intervals of half a minute, preceded and followed by short eclipses, and may be seen 20 miles off.

Between the two points of the entrance to the harbour, the depths are from 35 to 40 fathoms, and the course in is N.E. by N. nearly. [*N. by E.*] The usual place for anchoring is before the town, to the south-eastward of it, in from 18 to 15 fathoms. Without the citadel is an hospital, and between them a small mole in the form of an L, called the *Darce*, within which there is 16 feet of water: this is on the western side. The way to moor off the town is with a good scope of cable to the southward, and a hawser on shore, secured to one of the marble pillars, which are erected for that purpose. The wind you are most exposed to is the South and S.S.W.; and, when it blows fresh at S.W. there is a great swell. Large vessels sometimes anchor off the mole-head, and moor athwart, with a cable each way; but they are more exposed than those which lie before the town. Good water may be had at the town, and at a convent above it.

Fort St. Ospicio is about two-thirds of a mile to the eastward from Mala-Lingua Point: it stands on a point of rocks, which is steep on all sides. At nearly a mile to the northward, from this fort, is a small point; and on this stands the *Tower of Bosc*, and a little chapel. The coast between Bosc Tower and St. Ospicio forms a slender bay, in which vessels may anchor with westerly winds, in from 12 to 8 fathoms; but be sure to give Cape St. Ospicio a good berth, in order to avoid some rocks which lie off it to the distance of a cable's length.

REMARKS ON VILLA FRANCA, &c. BY MR. WM. SMITH, R.N.

VILLA-FRANCA.—There is no danger in standing into this bay, as the shore is steep-to on both sides, excepting one sunken rock, which lies about half a cable's length to the westward of Point Mala, on which the light-house stands. When you are within the small towers, which stand on each side of the entrance, you will find from 40 to 10 fathoms of water. The land around the bay is high and steep-to. During our stay we had no opportunity of determining the tides, but we were informed that they never rise more than two or three feet, and never run strong. This place is easily known, by the cities of Monaco and Nice, it lying nearly between the two; the light-house is also good, standing near the sea, on a point lower than the adjacent land. The best anchorage is on the west side of the harbour, near the town, and the farther you are to the northward the better; the ground and the under-tow is strong with a southerly wind, which blows directly in, and causes a great swell; but there is scarcely any strain on the cable. The bottom is of fine clay, and in the anchorage above mentioned the depths are 8 and 10 fathoms.

The land about Villa-Franca may be readily known from the eastward, it having a remarkable white way, or mark, in the mountain, which appears, when you are a great distance off the land, like a road; but it is, in my opinion, occasioned by the heavy rains from the mountains: this lies between Villa-Franca and Monaco, and is a good mark for finding either. The light-house of Villa-Franca is a high white building; the land at the back of it is high, which makes it difficult to be distinguished, at any great distance. It appears

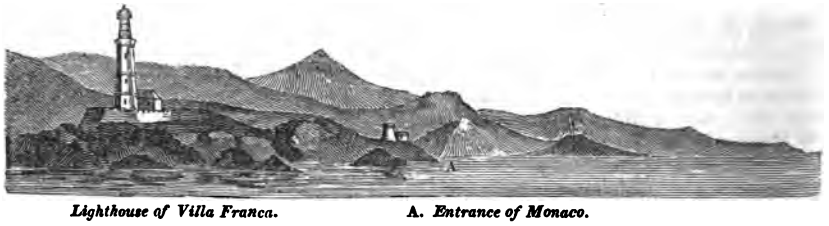
* Not, as given in the Nautical Magazine, Feb. 1839, 6° 24′ 52″.

like

like a sail when first seen. The land over Monaco is made very remarkable by a high table mountain, and another, to the eastward of it, like a sugar-loaf.

Wood may be had here by purchasing; and water, in great plenty, at Nice, which is only 3 miles to the westward, where it may be filled in the boat. Water is also to be had here, at the Naval Arsenal; provisions too may be had here, and refreshments of all sorts, in great plenty, with very good wine. On the west side of the harbour, between the arsenal and the town, stands a very strong fort; and on a point which projects from the north point of the harbour is another small fort. The best landing is at the town; but, in fine weather, there is landing in any part of the bay. Very little trade is carried on here, the City of Nice being so near it, where there is an excellent mole, and thence silks, oil, wine, &c. &c. are exported. Their Royal ships of war lie at the arsenal; and it is customary to salute here, as an equal number of guns are returned, and every mark of respect and attention is shown to his Britannic Majesty's ships and officers." *

MONACO.—*The fortified town of* MONACO stands at the distance of 6 miles E. ½ N. [*N.E. by E. ¼ E.*] from Cape Mala-Lingua and the lighthouse of Villa-Franca, and the land about appears as beneath, when seen from near the entrance of the Bay of Villa-Franca.



Lighthouse of Villa Franca. A. *Entrance of Monaco.*

The town of MONACO, which is fortified, is seated on a rocky head-land, trending nearly East and West, steep on all sides, and nearly inaccessible: it being constantly washed by mountainous waves. The roadstead, or harbour, is to the northward, or behind the point; and here small vessels may anchor, having their larboard anchor out to the N.E., and two fasts on the shore toward the town, with a very good one from the stern to the N.W. In this place are from 3 to 4 fathoms of water, the ground mud and weeds. In the bottom, toward the landing-place, are 5 and 6 fathoms, but this part is much exposed to East and S.E. winds.

The shore should not be approached, in any part, nearer than to a cable's length, because there are several rocks under water. In the entrance are from 10 to 16 fathoms. The N.W. winds blow with great violence here; and, with easterly winds, you cannot land without great difficulty. In the bottom, where the landing-place is, you will see the walls of a large garden, in which there is a well, where you may have water: there is also a watering-place at about a mile to the N.E. of the town, at a rivulet, which turns some mills; and beyond the rivulet, at the top of a mountain to the eastward, you may see the village of *Rocca-bruna*

Monaco is small, and the streets narrow: it has a garrison, and at its western end an old castle and a magnificent palace. The inhabitants, in small barks, export oil, lemons, &c. to Nice and Marseille. The interior land, to the West and N.W. rises to a great height.

CAPE St. MARTIN, &c.—At about five miles E. by N. [*N.E. by E.*] from Monaco, is a promontory, of moderate height, called *Cape St. Martin;* and, at 3 miles farther, E.N.E., is the small town of MENTON, which faces the sea. Between Cape St. Martin and this town is an irregular sandy shore, off which vessels may anchor with off-shore winds. The coast may be known by a high mountain, the summit of which, resembling a platform, and called the *Table of Monaco,* stands about a league and a half to the north-eastward of the town of that name. Another hill above it, a little to the eastward of the town of Menton, in the form of a sugar-loaf, and sharp on the top, is called the *Needle of Menton.* These are good marks, as both may be seen a long way off.

FROM CAPE ST. MARTIN to different points EASTWARD, the BEARINGS and DISTANCES are as follow:

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* In addition to the above, a very pleasing description of Nice and Villa Franca, by Lieut. J. Evans, R.N., is given in our larger Directory, Vol. I. pages 75, 76.

The

	Magnetic.	True.	
The Entrance of the Gulf of Spezia.....	E. by S.	E. ¼ N.	105 miles.
Viareggio, on the Coast of Tuscany.....	E.S.E. ¼ E.	E. ¼ N.	118 —
Entrance of the River Arno	E.S.E. ¼ E.	E. southerly.	119 —
The Melora Tower, off Leghorn	S.E. by E. ¼ E.	E ¼ S.	117 —
The Isle Gorgona	S.E. by E. ¼ E.	E. by S.	104 —
The North end of Capraia.....	S.E. ¼ E.	E.S.E.	107 —
The N.W. point of Cape Corso, Corsica..	S.E. ¼ S.	S.E. by E. ¼ E.	90 —

VINTIMIGLIA.—By the sea-side, at the distance of 2½ leagues E. by S. [*E. ¼ N.*] from Cape St. Martin, stands the town of Vintimiglia, at the base of a tract of elevated land. Above the town, on the west, stands a considerable fortress; and, on the east, is the mouth of the *River Roya*, upon the opposite bank of which is a little village on a plain. The river is shoal, and has a bridge over it, from the western side of the town. Small vessels may anchor before Vintimiglia, in fair weather, with off-shore winds, in from 13 to 10 fathoms of water; but the ground is bad, and there is no shelter whatever from the sea.

BORDIGHERA.—At about 3½ miles East [*E.N.E.*] from Vintimiglia is Bordighera, a small town, situated on a point of the same name, of a moderate height: it is encompassed with walls, and, at a distance, appears like a fortress; near the sea-side, to the westward, are a watch-tower and some fishermen's huts; and, off the point, are some rocks above water, but they are very near the shore.

ST. REMO.—At about 2½ miles to the E. by N. of Bordighera Point is *Cape Nero*, the western point of *St. Remo*. This is a large point, almost round, with a square watch-tower upon it, and a small house adjoining: at about 3½ miles to the eastward of this point, is *Cape dell' Armi*, or the eastern point of St. Remo, which is much like the former, and having likewise a square tower. Between these two points, almost in the middle of the bay, stands the small and pleasant tower of St. Remo, on a little rising ground by the sea-side, and having some gardens, with orange, lemon, and palm, trees near it. Within a small mole, which lies before the town, are from 6 to 8 feet of water. Large vessels may anchor off the town, at the distance of a mile, in 7 or 8 fathoms, on mud and sand: but they generally anchor farther out, in order to be in readiness to get under sail, there being no shelter from the sea-winds.

The neighbourhood of St. Remo is noted for its lemons, pomegranates, and other fine fruits; particularly vast quantities of olives, which yield excellent oil.

PORTO MAURIZIO.—At 3 miles N.E. by E. from Cape dell' Armi is a point of land with a tower, (*Terzolo,*) near to which is the village of *S. Stefano* or *St. Stephen*. Between these points the land forms a hollow, into which falls the *River Taggia*, and here is a little fort and point, with some houses, &c. At the mouth of a small river, a mile to the N.E. of Terzolo, is the village of *St. Lorenzo*. At 2½ miles from St. Lorenzo, to the E.N.E., is Porto Maurizio or Port Maurice, a small fortified town, standing on a rising ground by the sea-side, and having a convent and some houses near it, to the eastward. Off the port there is anchorage in 15 fathoms, but entirely open to the sea, except from the north.

ONEGLIA.—At one mile to the N.E. of Port Maurice is the town of Oneglia, and at a mile and three-quarters *true East* from the latter is *Capo Verde*, otherwise called *Cape Oneglia*, a large round point, with a round watch-tower on it. The town stands in a plain on the sea-shore, and on its western side the *River Impero* falls into the sea: it is surrounded with walls; and toward the sea are three forts, one at each end, and the other near the middle of the town; and toward the cape, are some fishermen's houses, and an octagonal fort upon a point, to defend the anchorage, which is opposite the town, within cannon-shot, on muddy ground; but ships lie farther out, in deeper water, on the same ground. Both places are quite exposed to the sea-winds.

The principality of Oneglia is divided into three valleys, *Oneglia, Maro*, and *Prela*, of which the first is covered with fruit-trees, intermixed with houses, so as to have the appearance of a continued orchard. Wine, fruits, and excellent olives, abound here. The chief export is the oil of the latter.

CAPE DELL' MELLE lies at the distance of 6 miles East [*E.N.E. ¼ E.*] from Cape Verde or Oneglia. This cape is a large high point, almost round, and projecting far into the sea. It has a square watch-tower on it, with two houses adjoining. Between the two capes, at rather more than a mile to the N.E. of the first, is the *Marina di Diano*, or village of *Dian*, before which you may anchor, at about a quarter of a league from the shore,

in

in 7 or 8 fathoms of water, with the steeple of the church, which is almost in the middle of the village, in a line with another which stands higher up. This anchorage is called the *Ditch of Dian;* the ground is of fine sand and mud, and the anchors hold very well.

At a mile and a quarter beyond Marina di Diano is the *Marina della Rovere:* at three-quarters of a mile more is the village of *Cervo:* at a mile and a quarter farther is the mouth of the *River Andora;* one quarter of a mile to the eastward of which is the *Marina d'Andora.* At half a league *true East* from the mouth of the Andora is *Cape dell' Melle.*

ALASSIO.—The POINT COSCIONE lies at the distance of 3¼ miles N.E. by N. from Cape dell' Melle. Between these points is a bay with a sandy shore; and on this, at 2½ miles from Cape dell' Melle, is the town of ALASSIO, which occupies a considerable extent on the sea-side, has three small forts, and opposite the middle one a small mole, or quay, for landing goods. To the northward of Alassio several villages, and two small round watch-towers, upon the sea-side, may be seen; and, at rather more than a mile to the southward of Alassio, near the sea-side, is the village of *Langueglia.*

You may anchor opposite Alassio, at the distance of a mile: the best berth is with the church-steeple on, or nearly on, with another farther inland, where there are from 18 to 10 fathoms of water, on sand and mud; as the anchors will not drag here. The S.E. winds blow in; but ships seldom ride with their heads to the wind, because a current generally sets to the S.W.

ALBENGA.—The town of Albenga stands near the shore, at 2½ miles N.N.E. from Point Coscione. At half a league South from Albenga, and nearly a mile from shore, lies the *Isola,* or *Island,* of *Galinara,* which is about a mile and a half in circumference. It is very high, and has a watch-tower. To the westward of this isle you may anchor, in 9 or 10 fathoms, with a fast upon the island. There is a channel between the coast and island, having, in the middle, a depth of 9 fathoms, but it is flat or shoal near the coast; and, at the nearest point of the island, there is also a small shoal.

POINT ALBENGA is the point of the mouth of the *River Arosvia;* it is very low and sandy, with trees about it. There is, also, at its extremity, a small fort; and, to the westward of it, a large monastery. The town of Albenga stands in a plain, with several towers about it, which the captains of rovers built in former times, to commemorate their victories.

FROM the ISLE GALINARA to Cape Noli the bearing and distance are N.E. by E. ¼ E. [*N.E.* ¼ *N.*] 11 miles. The coast between forms a large hollow or bay, having on it the town of *Loana* and several villages, as *Ceriale, Berghetto, La Pietra, Barzi, Finale, Versi,* and *Varigotti.* LOANO is 3 miles to the northward of Albenga, and you may anchor off it in from 12 to 10 fathoms of water. The smaller town of FINALE is 3 miles to the west of Cape Noli, and before this you may anchor in from 8 to 5 fathoms; but here is no shelter from the sea-winds. Behind the town, on a little eminence, are two considerable forts, near to each other, by which and Cape Noli this place may be known, when coming in from sea. *Varigotti* is a small village, standing near a point of rocks, a little to the westward of Cape Noli; between is a sandy shore.

CAPE NOLI is a large point, very steep, and smooth on the top, stretching a little way out to seaward. At 2 miles to the North from the Cape is the town of NOLI, seated in a sort of bay, having a sandy shore, and off which you may anchor, in 8 or 10 fathoms, with an off-shore wind. *Noli may be known* by several square and round towers, similar to those of Albenga. The inhabitants of this town are chiefly fishermen. At 3 miles N.E. ¼ N. [*N.N.E.*] from Cape Noli lies the *Isola de Bersezzi,* an islet having some ruins upon it, at about 350 fathoms from the main land; between are 7 and 8 fathoms of water. To sail through this passage it is necessary to keep in mid-channel, and to give a berth to some rocks above water, which lie near the shore. You may anchor to the westward of this isle, close to which are 12 fathoms of water. At a mile to the N.N.E. of the isle is *Cape Vado,* and between is the village of *Bersezzi,* on a mountain nearly covered with trees.

From CAPE NOLI the entrance of the PORT of GENOA bears N.E. by E. ¼ E. [*N.E.* ¼ *N.*] distant 26 miles.

CAPE VADO, lat. 44° 15′, long. 8° 25½′ E., stretches some distance out to seaward: it appears whitish at a distance. On its summit is the fort of St. Stefano and the ruins of some old fortifications. The road and town of VADO are to the N.W. of the cape; and in the bottom of the road are some houses along shore, with a small chapel, before which

which you may anchor, in 5 or 6 fathoms, and carry fasts on shore: the ground here is of mud and weeds.

Vado is defended by Fort St. Lorenzo, which is nearly half a mile to the S.E. of the town. You should not approach near this fort, because some sunken rocks lie off it. Large ships anchor in the road farther out. The East and S.E. winds blow in here, and generally cause a great swell; but, as the ground is good, there is little if any danger. S.W. winds also send in a great swell; but you must be particularly guarded against winds from the N.W., which frequently blow with great violence. Between Fort St. Lorenzo and the town of Vado the *River Segno* discharges itself into the sea; and to the northward of Vado, nearly a mile, is the little *River Quigliano*, from both of which, in the winter, a great flood of water falls into the sea.

SAVONA stands nearly 4 miles to the north-eastward of Vado: at a mile to the W.S.W. of Savona is the village of *Loggino*, with several manufactories for earthenware; and, between the little river of St. Bernard falls into the sea. The town is defended by a considerable fortress, which stands to the south of it, upon a rock near the sea. Before the town is a mole, the entrance of which lies open to the N.E., but it is now almost choked up with sand and rocks, and within the greatest depth is 7 or 8 feet. You may lie without the mole, with a hawser fast to it, in 12 or 14 feet of water; and, in going in, you must keep close to a large point on the western side, where the water is deepest.

From Cape Vado to the Harbour of Genoa the bearing and distance are E. ½ N. [*N.E. by E. ¾ E.*] 23 miles. All the coast between appears very high, and is covered with towns, villages, and fine seats, near the sea-side. The nearest village to the northward of Savona is *Arbizola*; thence follow *Cassizi*, *Prinosa*, *Varaggio*, *Inurea*, *Cogareto*, *Arenzano*, *Piano*, *Lesina*, *Voltri*, *Parmaro*, *Castellazza*, *Cornigliano*; the last is situated at the distance of half a league to the westward of Genoa; and between it and the city is *S. Pietro de Arena*, a suburb, containing many magnificent buildings, and extending along a sandy shore.

GENOA.—The city of Genoa, *Genoa the Superb*, beautified with noble buildings, stands at the foot of some high mountains, at the bottom of the Gulf of the same name, and may be seen at a great distance from sea. There is a wall, not only about the town, but around the mountain, which is cultivated and covered with fine gardens. The port is before the town, and is formed on the south by two moles, 16 or 18 feet above the level of the water; the one on the east, and the other on the west, side. That on the east, which stretches to the westward, is called the *Old Mole*; and that on the west, which stretches eastward, [*S.E. by E. ¼ E.*] is called the *New Mole*.

The mole-heads are about 300 fathoms asunder. Upon the summit of a high point of rock, on the west of the New Mole, (distant about a cable's length,) is the Lighthouse, a lofty square white tower, with a lantern on its top, which may be seen at a great distance; and on this tower signals are made on the approach of shipping by day. In coming from the westward, give a berth to the point on which the lighthouse stands, in order to avoid some rocks which lie off it.

The Lighthouse stands on a rocky point, named San Benigno, about a cable's length to the west of the New or Western Mole. Its total height above the sea is 146 feet. The light is fixed; five large lamps with parabolic reflectors; and may, from its elevation be seen afar off.

Harbour-Lights are also shown at the extremity of each mole.*

Land and Lighthouse of Genoa, when Cape Fino (A) bears nearly East.

* For a copious description of the town, habits, and customs, of the Genoese, by Mr. Leigh Hunt, see our large Directory, Vol. I, pages 80—83.

You

You may range very near the head of the New Mole, when you come to an anchor there; the depths being 10 and 12 fathoms close to it; but you may not approach so near to the head of the Old Mole, as some loose rocks lie a little way from it. There is no difficulty in sailing in between the mole-heads, as there is sufficient room for the largest ships: being in, you may moor behind the moles, with a cable or two fast thereon, and an anchor out a-head.

The general anchorage for large ships is behind the New Mole, in from 8 to 5 fathoms of water, mud and clay bottom, good holding ground. The common way of mooring is with an anchor out a-head, and two fast out a-stern to the New Mole. There is plenty of room for four or five sail to lie at their anchors, and to moor with a cable each way, which appears to be preferable, especially in the winter, in which season the North and N.E. winds blow very strongly from the mountains behind the city. The eastern side of the harbour, within the Old Mole, is made use of by merchant-vessels only, the depth being insufficient for large ships. Besides the lighthouse on the western side, there is a high and conspicuous round-tower on this side of the harbour.

In the bottom of the port, toward the middle of the town, are two basins, shut up with a chain, one of which is for the national gallies, which are numerous, and the other for small trading vessels: there is plenty of good water to be had at several places. With the winds at S.S.E. and S.E., the sea runs very high in the harbour.

There is anchorage in the roads from between one to two miles without the mole, in from 10 to 24 fathoms, clay bottom, with the lighthouse bearing from N. by W. to N.N.W.

Wood may be purchased tolerably cheap, and water may be obtained in the old mole, sufficient for any number of ships. You fill the casks in the boats with a hose. Fresh beef, remarkably good, vegetables, and refreshments of all kinds, may be had, at a reasonable price. The manufactures of Genoa consist of damasks, silks, velvet, and plush, and some trade is carried on in oil, wines, and corn.

At nearly a mile to the eastward of Genoa is the large village of Besagno; between is a river, which at times becomes a large flood of water, especially in the winter. From the eastern mole of Genoa to the *Pt. Chiapa*, the western point of Mount Porto-Fino, the bearing and distance are S.E. ¼ E. [*E.S.E.*] 12½ miles. The coast between forms a hollow; the land is high, and decorated with villages, besides the town of *Nervi*, which is on the shore, at 5 miles from Genoa. In all this extent there is no good anchorage.

PORTO-FINO.—The point of Mount Porto-Fino is large, and appears round and steep on all sides. From this point to that which forms the harbour of Porto-Fino the distance [*E.S.E. true*] is 3 miles, and the land between is very high and steep. The last point forms the western point of the bay called the Golfo di Rapalo, which is here four miles in breadth, and at three-quarters of a mile within it is the fortified town and little harbour called Porto-Fino. The last is capable of containing only seven or eight galleys: it is about 140 fathoms long, and 70 wide, and cannot be seen until you are nearly opposite to it. At the entrance are 9 fathoms of water, and within, in the middle, only 3 or 4 fathoms; the ground is mud and weeds. On the south point of the entrance is a small fort; and, on the north side, is the town, where all along the kay are great pillars for vessels to moor by. The harbour is directly open to winds from the E.N.E. This place, situated between two mountains, was the *Portus Delphini* of the antients.

The BAY of RAPALO has on its shores the towns of Rapalo, Chiavari, and Sestri di Levante, besides several villages. The last town stands near its S.E. point, at the distance of 3 leagues to the S.E. ¼ E. [*E.S.E.* ¼ *E.*] from Porto-Fino. The water in the bay is very deep, and the anchorage close to the land, but in no part safe, being quite exposed to southerly winds. On the N.W. side are the two villages named *S. Michele* and *S. Margherita*, which may be easily known, as they are separated by a point on which stands a fine palace.

At half a league to the southward of *Sestri Levante* is the promontory called *Point Manara*; and, from this point, at 4 leagues S.E. by S. [*S.E.* ¼ *E.*] is the *Point del Mesco*, which is large, very high, steep on all sides, and has a chapel on it. The coast between forms several bays, and in the bottom of one, at 5 miles from Point Manara, is the town of *Moneglia*: there are, also, several villages on the sea-side, and all the coast is very high.

From the Point del Mesco to the entrance of *Porto Veneré* the distance is 10 miles S.E.

S.E. ½ S. [*S.E. by E. ½ E.*]: this coast is likewise very high and steep, and has several villages near the sea.

PORTO VENERE' or VENERO lies to the west of the entrance of the GULF of LA SPEZIA, and has a village by the sea-side, at the foot of a mountain covered with olive-trees. The island *Palmaria*, which lies directly opposite, forms the harbour, and its western point reaches to the distance of two cables' length from the town, so as to form the harbour: through this channel a galley may pass, if conducted by a person acquainted with it. From the middle of the island, Palmaria, a long point of sand and mud stretches out, under water, toward a convent that stands upon a point to the eastward of the town: in this part there are not more than 2½ fathoms of water; but between the two eastern points of the entrance are 9 or 10 fathoms. You may anchor in 6 or 7 fathoms, and lie secure from all winds; being sheltered on the west by the above-mentioned bank, which should be approached with caution.

Off the south side of Palmaria is the Islet *Tino*, and between is a narrow passage, having from 16 to 18 fathoms of water. Close to the southward of Tino are two rocks above water, and several which are covered, and require caution: approach no nearer to them than the depth of 14 fathoms. Just off the eastern end of Palmaria is an islet of rock, called *La Scola*, with a square castle on it, and having close to it 6 fathoms of water.

On the Islet Tino is a new tower, in latitude 44° 1′ 44″ and longitude 9° 51′ 42″, having a fixed light, with the improved lenses, at 384 feet above the level of the sea, and seen, in clear weather, at the distance of 25 miles. (1838.)

The GULF of LA SPEZIA (antiently *Portus Lunæ*) is one of the best harbours in the Mediterranean Sea. It is, at the entrance, 5 miles broad, and 6 deep; and has good soundings all over it. On the western side of the Gulf, at two miles to the eastward of Porto Veneré, is the citadel or fort of *Santa Maria*, (St. Mary,) which stands on the outer end of a long point of rocks, fortified on all sides. From this point to the town of SPEZIA, which is at the bottom of the gulf, the distance is 3¼ miles. Immediately within the citadel of St. Mary is a creek, about 250 fathoms wide, and nearly 400 deep, where a few vessels may anchor in 4 or 5 fathoms. Beyond this, on the north, is another, larger and deeper, where there are 5 or 6 fathoms, the ground mud and grass; but this is allotted for *quarantine only*. Another is described hereafter.

The town of Spezia is surrounded with very old walls; its figure is almost square, and stands on a plain by the sea-side; before which there is a small kay for landing; but it can be approached by boats only. In the vicinity are numerous villas, with plantations of olive and other fruit-trees.

Ships may anchor almost all over the gulf, in from 18 to 12 fathoms. You may run ashore, in case of necessity, opposite the town, the ground there being muddy.

On the eastern shore, at nearly 3 miles from the town of Spezia, is the small village of *St. Terenzo*, near a point of the same name: and, at 2½ miles farther to the S.S.E. is the town of *Lerici*, on a point of land, upon which, also, near the town, is a small fort. At a mile and a half to the south-eastward of Lerici, and 5 miles S.E. ½ S. [*S.E. by E. ½ E.*] from Fort Sta. Maria is Cape Magrezo or Point Corvo, the south-easternmost point of the Gulf of Spezia.

DIRECTIONS FOR THE GULF OF SPEZIA, or SPEZZIA, (pronounced *Spedzia*,) BY A CAPTAIN OF THE BRITISH NAVY.*

"CAPE MAGREZO, on the eastern side of the gulf, is very high and bluff. Of the islands on the opposite side, Palmaria is higher, as well as much larger in extent, than either of the others. It is nearly a mile and a half in length. As there are a number of sunken rocks near Tino, it is adviseable to give the outer, or S.W. one, a good berth. The islet *La Scola* lies to the eastward of Palmaria, at about 160 fathoms distant: between these are some sunken rocks. When you are to the northward of this islet, which has a square castle on it, (as before noticed,) you will see Port Veneré open, between the north side of Palmaria and the main; at the same time you will see the citadel, or Fort St. Mary, standing on a high rocky point on the western shore. From this point

* The highly respected Captain John Tremayne Rodd, afterward an Admiral, and K. C. B.

BASTIA is the chief town of the department of the Golo,* and the capital of Corsica. It is commanded by high land, in the centre of which the sea forms a small indent, which is defended by a mole. The town is divided into two parts, *Terra Nuova* and *Terra Vecchia*, (New Town and Old Town,) in the former of which is a citadel, surrounded with fortifications. The harbour is small, and fit for small vessels only. Its latitude is 42° 42'. The general exports are skins, wines, pulse, oil, and figs; which abound in the surrounding country.

Upon the extremity of the mole on the right side of the entrance, in lat. 42° 41' 48", long. 9° 27' 7", is a harbour-light, fixed, at 52 feet above the level of the sea, and visible at three leagues off.

The entrance of the harbour has been described as only 90 yards wide, and exposed, not only to easterly winds, but to very dangerous puffs of land-winds, chiefly from the N.W., which at times cause much damage to the barks and other vessels. This entrance lies between the head of the mole and the *Lion*, a great rock to the southward of it, and on the larboard side in entering. It is practicable for only one vessel to enter at a time: they must take care to keep exactly in mid-channel, and so soon as they have anchored, a cable is immediately carried on shore to one of the stone pillars erected for that purpose on the mole: they lie in 3 or 4 fathoms, on a ground covered with weeds and oaze. At the end of the mole is a watch-house, where, in bad weather, a fire is lighted, to direct vessels during the night.

There is anchoring-ground, in 10 and 11 fathoms, at a cable's length to the eastward from the mole and the northern part of Bastia. To the northward of this, and at the end of the suburb, is a brook of very good water, commodiously situated for shipping.

At two miles to the southward of Bastia is the entrance of the *Etang* or *Lagoon* of *Biguglia*, and thence to a projecting point at the mouth of the River Golo, named *Punta D'Arco*, the bearing and distance are nearly S. ¼ E. [*S.S.E.* ½ *E.*] 3 leagues. In all this space the land is low, marshy, and green, except the point which rises a little above the rest. At 5 miles to the southward of the mouth of the Golo is that of the *Fiumalto*, the north side of which is distinguished by the Tower of St. Pelegrino.

The coast hence trends nearly true South, 22 miles, to the Tower of Aleria, on the south side of the mouth of the *River Tavignano*. There are several towers between, on different points of the coast, and the entrances of several little rivers. CORTE, the chief inland town of Corsica, stands on the north side of the River Tavignano, at the distance of nearly 9 leagues above the Tower of Aleria.

There is said to be a dangerous sunken rock about 4 miles off the Tower *Fiorentina*, in latitude 42° 17', and 4 leagues to the N.E. ¼ N. [*N.N.E.*] from the Tower of Aleria. At about 4 miles to the southward [*S.S.E.*] of this rock there is said to be another of the same description.

From the mouth of the Tavignano, about which are several shoals, the coast trends S.W. ¼ W. [*nearly S.W. by S.*] 8½ miles, to the *River Fiumorbo*; and thence S.W. by S. *nearly S. by W.*] 9 miles, to the Tower of *Solenzara*, where high land commences, the anterior coast being low and sandy. A dangerous shoal, called the *Marise*, lies at the distance of a mile off the mouth of the River Fiumorbo, having close to it a depth of 14 fathoms.

On an elevated point of coast, by some called *Cape Faela*, 9 miles to the southward of the Tower of Solenzara, is the Tower of Faela: to the southward of this is a cove, with a sandy beach, called the *Plage de Saracco*, wherein small vessels may anchor with westerly winds.

PORTO VECCHIO.—The Tower of St. Cipriano, or St. Cyprian, which is 6 miles to the south-westward of that of Faela, distinguishes the western side of a cove of the same name, and the northern side of the entrance of PORTO VECCHIO; the last is an inlet, formed by Cape St. Cipriano on the north, and Cape Della Chiappa on the south; distant from each other rather more than a mile, in a true N.N.W. and S.S.E. direction. The land on both sides is high, and the mountains here reach nearly to the sea-shore.

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* The northern department of Corsica is that of the *Golo*; the southern, that of the *Liamone*, of which the chief town is Ajaccio.

There

There are several islands at the entrance of Porto Vecchio, which form three distinct channels; the largest of these islands, called *Galera*, or *Pecorella*, lies rather nearer to Cape St. Cyprian than to Cape Chiappa: it has some rocks about it, particularly on the north side, whence they stretch above a cable's length to the N.E.; by giving it a berth, you may, in any ship, sail in between it and Cape St. Cyprian: this is called the *North Channel*. S.W. by S. [*S. by W.*] of Pecorella Island, above one-third of a mile, is a rock called *Chiapino*, having some smaller rocks about it. Between these is the *Great Channel*, which is also the best, having from 12 to 15 fathoms of water in it. The Chiapino lies about 200 yards N.E. from Cape Chiappa, and forms, with the cape, the *Little Channel*, in which there is not less than 10 fathoms of water.

Porto Vecchio (pronounced *Vekkio*) is 2½ miles deep, and there is good anchorage from the islands at the entrance to that which lies at the farther end. In the middle are 5 or 6 fathoms of water, on grass and oaze; but, as the land-winds are violent, you must ride with a spring upon your cable. The winds from the sea can do no hurt, the swell being broken off by the islands at the entrance. Good water may be had at two places; one on the larboard, and the other on the starboard, side of the anchoring-place. The town and fort are at the west end of the harbour; but the former is nearly abandoned, and the latter is in ruins, owing to the noxious qualities of the air, arising from the marshy grounds in the neighbourhood, which renders the place almost uninhabitable. In advancing from the eastward, this port may easily be known, by a high rocky mountain, standing near it, like a stately column.

Southward of Cape Chiappa, at from 1½ to 3 miles, are four small islands, lying about N.E. by E. and S.W. by W., called the *Cervicales Islands*: there is a channel for small vessels between them and the shore, with 8 to 12 fathoms of water, where they may also anchor, if necessary. Of these isles, the northernmost is called *Cibiciana*; the second, *La Minora*; the third, *Santa Suera*; and the fourth, *La Servi*. Off Cibiciana, about half a mile, is a rock above water, called the *Verararo*, or *Small Bull*; and 1½ mile S.W. of it, lies another, called the *Great Bull*, to the eastward of which is a white bank, with only 14 feet of water on it, though there are between them, near the Bull, 35 fathoms, and 25 close to the bank.

At 3 miles W. by S. from *La Servi* is *Porto St. Giulia* or *St. Giulia's Cove*, at the entrance of which you may ride in 10 fathoms of water; and close to the southward of it, divided by the point of *Raphaelle*, is that of *Porto Novo*. About a mile to the southward of Porto Novo is *Sponzalia Tower*; and, 1½ mile farther, is *Point Precilba*, high and projecting; near which, to the southward, is *Cape Rondana*, also very high, which forms the north point of the entrance of *Santa Manza*.

Santa Manza Harbour is about two miles deep, from Point Santa Manza, on which stands a tower bearing the same name, and which lies about 1½ mile to the southward of Cape Rondana; it is about one mile across, narrowing a little as you proceed to the S.W. toward the head, where good water may be easily obtained. The anchorage is in from 10 to 14 fathoms of water, on good ground, where you may lie very safely, though N.E. winds send a swell in: small vessels may go farther in, and anchor in from 4 to 5 fathoms of water, entirely sheltered.

From Santa Manza Point to Fiumara Point the distance is 4½ miles, S.W. by W.; the land between is very high and steep. *Point Fiumara* to *Cape Chiantarella* is the southernmost point of Corsica; and, at about 500 or 600 yards to the southward of it, lie some rocks, partly covered, called *Chiantarella*: care must be taken to avoid them. Between Santa Manza Point and Cape Chiantarella, at the distance of 2 or 3 miles off the coast, there are several islands, rocks, and shoals, with very unequal depths of water near them; and, although there are good channels between them for those who are acquainted, it is adviseable for ships bound through the *Strait of Bonifacio* to pass to the eastward and southward of them all.

From *Cape Chiantarella* the coast trends nearly true west, two miles, to *Cape Blanco*, or the *White Cape*, by some called *Cape Antonio*, by others the *Pierced Cape*, the rock being pierced through; and thence, to the entrance of *Bonifacio Harbour*, it is nearly two miles N.N.W.

The STRAIT of BONIFACIO is the channel, or passage, which divides the island *Corsica* from *Sardinia*: it is bounded on the north side by the south part of Corsica, and the islands *Cavallo*, *Lavessi*, and *Perduto*, all of which are encompassed with dangerous rocks

rocks and shoals: and, on the south side, by the north part of *Sardinia* and the *Barelino Islands*, hereafter to be described with Sardinia.

The breadth of the strati between *Capes Blanco* and *Longo Sardo* is about 6 miles; but farther eastward, between *Lavessi* and the *Barelino* islands, it is less than 3 miles. Ships of all descriptions may navigate this strait without fear, there being no danger whatever, if they keep in mid-channel, although the sea is often very high, and the waves dash along with a prodigious roaring, owing, perhaps, to its passage being made narrower on the east side, by the islets and rocks adjacent to the main islands. In sailing through, it is necessary to give Lavessi a good berth, in order to avoid the sunken rocks, which lie off its southern side.

The HARBOUR of BONIFACIO is a creek, a mile in depth, about 70 fathoms in breadth, and appears like a river. It can be entered in fair weather only, and with a fair wind. At the entrance are 14 fathoms of water; and, a little within, on the left hand, are two or three rocks above water; but you may pass close to them, and keep in mid-channel, until you get up opposite the town, where there are 5 or 6 fathoms of water. On the starboard side of the entrance is a fortress, off which there is a large rock above water, close to which you may pass: on the larboard point is a watch-tower, *La Madonetta*; and, as you proceed in, on that side, there are two creeks, where galleys may anchor. Near the bottom of the port, on the starboard side, is a considerable citadel, with the town near it, and a few houses on the sea-side: opposite this castle you may anchor, in oazy ground, in from 4 to 6 fathoms of water, and moor across the harbour. Good water may be had at some gardens in the bottom of the port.

From the entrance of Bonifacio to Cape Fieno, the bearing and distance are N.W. by W. 2½ miles. The land between is very high, and the mountains stretch downward close to the shore. It forms two indents, or coves, called *Fachola* and *Paravane;* in the former of which there is shelter from all winds for small vessels; but it is necessary to be well acquainted with the channel, which is made very narrow by the islands in the entrance. Cape Fieno is foul and rocky, to full 3 cables' length off, as is the coast between it and the above-mentioned coves, though not to so great an extent from the shore.

GULF of VENTILEGNA, &c.—From *Cape Fieno* to *Cape Figari* is about 4½ miles N. by W. ¼ W. [*N.W. by N.*] In this space is the Gulf of *Ventilegna* and the *Port Figari*, separated by the point of Ventilegna, which is foul a cable's length off. There are several rocks and islets on the starboard side of the gulf also; but at the bottom, is a fine sandy beach. Port Figari is about one mile wide, and has several rocks close to the larboard side, as well as those on the starboard, leaving a clear passage between of 10 or 11 fathoms of water. Ships generally anchor farther in, in 6 or 7 fathoms of water. The direction of the point is N.E. and S.W., and it is about one mile and a half deep, having at the bottom several little islands, which extend to the mouth of the little river *Canalle.*

FROM CAPE FIGARI to *Point Roccapina* the course and distance are nearly N.W. 2 leagues: this point has a tower on it, and a convenient landing-place on the west side. About a mile westward of Cape Figari lie the *Ecuiels*, or *Briccia Rocks*, stretching off the shore, to 3 or 4 cables' length: farther to the N.W. is *Olmeto Cove*, formed on its west side by a point of the same name, which is very high, as well as the other parts of the coast, and projects far into the sea, with many detached rocks near it; and, between it and Point Roccapina, is another cove, westward of which are some sunken rocks, lying nearly a mile off the shore.

FROM POINT ROCCAPINA to *Point Guadiola* the distance is 4 miles N.W. ¼ N. [*N.W. by W. ½ W.*]; there are two coves between, separated by *Point Barbarina.* About 3¼ miles farther N. by W. ¼ W. [*N.W. ¼ N.*] is *Point Tizzano*, which is very high; and, to the south-eastward of it, is a large cove, with an extensive sandy beach.

LES MOINES, or the MONKS.—Very near Point Tizzano is a small islet, called *La Botta;* and, 8 miles S. by E. ¼ E. [*S.E. by S.*] from the same point, lies a ledge of rocks, called the *Monks*, extending in a broken chain nearly 2 miles N.E. by E. ¼ E. and S.W. by W. ¼ W. [*N.E. ½ N.* and *S.W. ½ S.*], and about 2 cables' length wide, several of which are above water; they bear from Cape Fieno N.W. ½ W. [*W.N.W. ¼ W.*] at the distance of 10 miles from it, and are about 2¼ miles off Point Roccapina, which is the nearest land. The outermost of these rocks is about three-quarters of a mile from the body

body of the western groupe, and has 5 feet on it, and 12 to 15 fathoms at a boat's length from it all round: it lies about 4½ miles from the shore of Corsica. There are several sunken rocks between that and the main body, but they are easily discovered by the sea breaking over them. Near the southernmost breakers there are 4, 5, and 6, fathoms of water; the highest of the westernmost groupe is about 40 feet, and that of the easternmost groupe about 30 feet, above water. The passage between these rocks and the main has a depth of 15 fathoms, and is very good for those who are acquainted.

In a direct line S.W. by W. ½ W. [*S.W.* ½ *S.*] from the outermost sunken rocks of the Monks, a bank of about a quarter of a mile in width extends, with 16 fathoms on it, and 25 fathoms close to it on each side: it is composed of coarse sand and stones.

From Point Tizzano to *Cape Senetosa* the bearing and distance are N. ¼ E. [*N. by W.*] a mile and three-quarters. *Tiscara Cove* lies between, where the river *Mortara* falls into the sea. Cape Senetosa is very high, and has a tower on it, and a point projecting into the sea, near which lie the *Eccicha Rocks;* and northward of these is another point called *Cape Chimouri:* there is a passage between the land and the Eccicha Rocks, with 15 fathoms of water in it.

GULF of VALINCO or Campo Moro.—At 3½ leagues N. ¼ W. [*N.N.W.* ¼ *W.*] from Cape Senetosa lies *Cape Muro,* the coast between forming a bay nearly 3 leagues deep, called the Gulf of Valinco. This gulf is quite exposed to westerly winds, but has some tolerably good anchoring-places on the north as well as on the south coast, the principal of which is Port Campo Moro. *Port Campo Moro* is upon the south coast, and is known by a large cape at its entrance, on which stands a fortified tower; this cape lies about 3½ miles N.E. from Cape Senetosa, and the land between is very high. Off the Point of Campo Moro, at a musket-shot distance, are two small rocks, which, when sailing into the port, are to be left on the starboard side. So soon as you are within them, you will perceive a great cove and a vineyard, for which you should steer; and so soon as you are in the cove, you may anchor between the vineyard and the point, at the distance of 2 or 3 cables' length from the shore, in from 16 to 22 fathoms of water, with the tower bearing about N.N.W.: the point will then be on with Cape Muro, and you will be land-locked, beside being sheltered by the rocks above-mentioned. Small vessels anchor farther in, and lie in from 10 to 14 fathoms of water, still better sheltered, where they may have one cable on shore. Good water may be had at the spring in the bottom of the cove.

At 2½ miles to the E.N.E. from *Point Campo Moro* is *Portigliola Point;* and at 2¼ miles farther, on the same course, is the *Punta Bitorsima,* off which lie a cluster of rocks above water. Between the latter two, and near the former, is the small port of *Giolo:* near the latter, the *River Valinco* empties itself into the sea, off which you may anchor in 14 to 20 fathoms, on good sand, and clean every where; but this anchorage is not safe in the winter season. There is also anchorage, farther northward, off the tower of *Zille,* in 7 or 8 fathoms of water.

Porto Pollo is on the north side of the gulf, where the anchorage is quite exposed to S.S.W. winds. Porto Pollo Point stretches a considerable distance into the sea, and has a tower on it: at the distance of 4 miles N.W. from it, are the point and tower of *Campo Nero.* Between the two is *Cala Ferno,* a cove little frequented. From the last-mentioned cape to *Cape Muro* it is above 2 miles N.W. ¼ N.; there is a small cove between, called *Cala d'Orso,* where a vessel may anchor with the winds from N.N.W. to S.E.: on the larboard side are some rocks, and, at the bottom of the cove, is a little river with a sandy beach, where you may land with off-shore winds.

The GULF of AJACCIO, which is the finest bay of Corsica, lies between *Cape Muro* on the south, and *Cape Sanguinara* on the north: these points bear N. ¼ E. and S. ¼ W. [*N. by W.* ¼ *W.* and *S. by E.* ¼ *E.*] at the distance of 3 leagues from each other. The isles of *Sanguinara* lie to the S.W. of the cape; the larger one has a tower upon it, and some islets and rocks about it: between it and the cape is a channel for small vessels, being about 2 cables' length wide, and 3½ to 4 fathoms deep.

It is necessary, when coming in from the northward to give Sanguinara Island and rocks, which you leave on your larboard side, a good berth; and, when within them, you may anchor at about 3 cables' length from the shore, in from 15 to 18 fathoms of water, abreast of a place called *Fornaci,* near which are a brick-kiln and a tile-kiln; and, about 3 miles to the eastward of it, is a cove, with a house standing in the bottom of it.

The

The TOWN of AJACCIO, which is populous, is situate on the north side of the gulf. On proceeding to the eastward for this place, you will pass a rock above water, called *La Botta*, and, at the distance of a mile farther eastward, another small rock very near the shore, abreast of which stands a chapel. Both of these rocks are to be left on the larboard side, as is the point of the citadel, which you must not approach nearer than to the distance of a cable and a half, on account of a sunken rock, which lies to the southward of that point a cable's length, with 10 feet of water on it: it is about 40 fathoms across each way.

So soon as the citadel bears N. by E. from you, you may steer up N.E. by N. or N.E. for the road, and anchor in 10 to 14 fathoms of water, on muddy ground, with the point of the citadel bearing W.S.W.; or you may run farther to the northward, near the bottom of the harbour, and anchor in from 7 to 9 fathoms of water, with the point of the citadel bearing about S.W. by S., where you will be quite land-locked. At about a mile and a half eastward from Ajaccio are some rocks above water, called the *Sardineras*, along which you may sail as near as you please; within, to the eastward of these, the largest ships may anchor in *Capitello Bay*, in 18 to 23 fathoms of water, on sand and oaze, one-third or half a mile from the shore; but, with sea-winds, you will lie safer behind the *Sardineras*, in 10 or 12 fathoms of water, than in any other part of the bay.

In the middle of the Gulf of Ajaccio there is no ground at 130 fathoms, and in most parts it is steep close to the shore. South-west winds blow full into the gulf.

From *Cape Sanguinara* to *Cape Feno* the bearing and distance are N.N.E. 4½ miles. Cape Feno is very high, and has a tower on it; at about a mile to the southward of it is an islet surrounded with rocks, to which you must give a good berth in passing.

The GULF of SAGONA lies between *Cape Feno* and *Point Carghese*, which bear true North and South of each other, 10 miles; and it is about 6 miles in depth. From Cape Feno, about 4 miles E.N.E., is *Point Provenzale*, on which stands a tower; and to the southward of it is a port bearing the same name, fit only for small vessels in the summer-season, where they lie in 8 to 10 fathoms of water, quite exposed to the westerly winds. Three miles and a half farther on is the *Tower Orcina*, and 1½ mile north of it is the *Tower Capigliola*; the coast between forming a bay, which is also the bottom of the gulf, and is called *Palmentogia Cove*. From Capigliola Tower, northward, to that of Sagona, the distance is nearly 3 miles: this tower is easily known by its whiteness, which is perceptible at a great distance; between is a fine sandy beach: and here the *Liamone*, a considerable river, discharges itself into the sea: to the northward of this river are lofty mountains, which extend quite to the sea-shore; and off the mouth of the river, about a quarter of a mile, is an islet or rock above water.

The HARBOUR of SAGONA is tolerably good and clean. When sailing in you should steer toward the white tower, which you leave on your larboard side, and run along at about a musket-shot's distance from the shore, and you will pass a small rock under water. So soon as you have passed the tower you may anchor in 9 or 10 fathoms of water, and carry a cable on shore; small vessels go farther in, and anchor in 5 or 6 fathoms, exposed only to W.S.W. winds. Water may be had at the river, which runs just by.

From Sagona Tower to *Point Carghese* an irregular coast trends about 4½ miles to the N.W. [*W.N.W.*] there being some small coves between: the land is all high mountains close to the shore; and Point Carghese is known by the tower on the top of its mountain, which projects a great way into the sea. About 1½ mile farther N.W. is *Cape Domigna*; and from it, at less than 2 miles N.N.E., is *Point d'Orcino*, on which stands a tower; and off which, at a musket-shot distance, are some breakers. From Point d'Orcino, 4 large miles N. by E. ¼ E. [*N. ¼ W.*] is *Cape Turghio*, surrounded by rocks above and under water; it has a tower standing upon the high-land, which is a continuation of the mountainous land extending from the eastward.

GULF of PORTO.—From *Cape Turghio* to *Cape Scandola* the bearing and distance are N.N.E. 2 leagues. Between these capes is the GULF of PORTO, which is very little known; and on the north side of which is *Port Giralata*, in which there is but indifferent anchorage.

The ISLE GARGALO, which is about 2 miles in circumference, is very high, and has a fine tower upon it; it lies about 2 miles N. by E. from Cape Scandola, and is about 40 yards distant from the shore; about a mile farther to the N.E. is the point of the main land,

land, called *Point Gargalo*, off which are two detached rocks. All the land, from Cape Turghio to this point, is mountainous; near the latter is a very high mountain, called *Monte Capo Giacomo*.

About 14 miles N.E. ½ E. [*N.N.E. ½ E.*] from Gargalo Point is *Cape Rivellata*. Two miles from Gargalo Point is *Punta Bianco*, or White Point, which is of considerable height, with a rock near it; and about 2 miles farther to the N.E. are the *Galeria Rocks*, lying about a mile off the land. Beyond these rocks, about 2 miles, is *Port Galeria*, where there are a fortified tower and a river, but no anchorage for shipping. About 3 miles farther, true *North*, is *Cape di Valle*; the land between is high and steep, and there is a fine cove, which bears the name of the cape, in which there are a sandy beach, and a river, but no anchorage, except with off-shore winds. From Cape di Valle to *Cape Cavallo* is nearly 4 miles N.N.E. and N.E. with a very high coast, and a tower about mid-way, called *Truccio*; from thence it is nearly 5 miles to Cape Rivellata, the coast between forming a deep bay, into which a river discharges itself.

CAPE RIVELLATA rises to a great height, and has a detached islet very near its eastern-most point, and on the west side a small cove and another islet. It may easily be known by its height, and by being the north-west extremity of the island of Corsica.

GULF of CALVI.—At 3½ miles E. ½ S. [*E.N.E. ½ E.*] from Cape Rivellata is *Cape Spano*, and between these Capes is the GULF or BAY of CALVI, near the middle of which is the town of that name. The town is fortified, and stands on a point of rocks, very steep to seaward: it is nearly 2 miles S.E. by S. [*S.E. by E.*] from Cape Rivellata. To the westward of the fortress is a very high rocky point, near to which, on another eminence, stands a chapel; and westward of this is the Bay of Rivellata, where there is anchorage, with westerly winds, in from 12 to 20 fathoms of water. To the southward and eastward of the town of Calvi are a large cove and sandy beach, off which you may anchor; but the best place is near the town, at 2 cables' length from the shore, in 4 to 6 fathoms of water, on sand and oaze, where you lie with one cable fast to the rocks toward the N.W., and an anchor to the S.E. You should not go farther in than the innermost bastion of the town. In the cove is room for several vessels to lie, sheltered even from the N.N.E. winds, to which you are most open.

In sailing in you may range as close to the point of the town as you please, there being 3 fathoms of water at the foot of it, and ships may likewise anchor here. The South and S.S.W. winds are the most troublesome, because they come between the mountains, and blow in squalls, but they cannot cause any sea. There is a small watch-tower on the sea-side, without the fortress, and an old convent. At the bottom of the cove is a large plain, some marshes, and a pond, where you may water, but close by there is nothing but high mountains.

CAPE SPANO is a long low point, stretching into the sea, at the end of which are several rocks above and under water, which you must not go near; on the top of this point is a round watch-tower, and a little above it, on a rising ground, a small square fort. About 3 miles to the eastward, from Cape Spano, is the fortified village called *Algajola*, situated on the sea-side, above which you may see other villages on the mountains. At about 2 miles to the N.N.W. of Algajola is a shoal, with only 4 feet of water on it, and which therefore, must be carefully avoided.

At 4 miles to the eastward from Algajola is *Isola Rousse*; on the S.E. point of the island is a watch-tower, with guns in it; you cannot pass between the island and the land but in boats. Near to this isle there is a large rock above water, to the eastward of which small vessels may anchor with off-shore winds.

From Isola Rousse to *Cape Dostriconi* the distance is about 2 leagues East [*E.N.E.*]; and 4 miles farther, to the E.N.E., is *Point Renella*: the coast then bends to the eastward for 5 miles, to *Cavallata Point*, and 2 miles S.S.E. to *Point Mortella*, which is the western point of the *Gulf of St. Fiorenzo*; all the coast between is very high, and affords no shelter whatever. The *Town of St. Fiorenzo* lies 3 miles to the S.S.E. of the tower on Mortella Point.

The GULF of St. FIORENZO is broad and deep, and has several watch-towers on the eastern coast, which is steep-to; beside that on the western side, on Point Mortella, already mentioned. Abreast of this tower, at 3 cables' length from the shore, there is anchorage in 12 or 13 fathoms of water. In advancing from the westward, approach not too near Point Mortella, as some rocks lie off it. Nearly 2 miles to the

southward of Point Mortella is *Porto Forno*, abreast of which, at the distance of nearly a mile, is good anchorage for ships of war, in from 12 to 14 fathoms of water, or at 3 or 4 cables' length from the shore, in 9 or 10 fathoms of water, oazy ground: you will then have the town of St. Fiorenzo bearing about S.S.E.; Porto Forno, W.N.W.; and Point Mortella, N.N.W. There are some rocks near the shore, which you must be careful to avoid.

Small vessels may anchor opposite the town of St. Fiorenzo, but they must be careful of a rocky ledge which lies above 2 cables' length from the shore; also of a rock which lies off the north end of the town, upon which the sea often breaks: you may pass between these in from 6 to 3½ fathoms of water.

Both in entering and sailing out of this *gulf*, it is adviseable to take the mid-channel, or rather nearer the western than the eastern shore; for, without Point Mortella, if the S.W. or westerly winds have prevailed, there is generally a great swell, which may drive you toward the coast of *Cape Corso*, where the water is too deep for anchorage; whereas, to the westward of Point Mortella, you can anchor any where.

At 3½ miles N.E. ¼ E. [*N.N.E. ¼ E.*] from St. Fiorenzo is the *Tower of Farinale*; from this tower the coast stretches irregularly 16 miles northward, to *Cape Bianco*, or the N.W. point of Cape Corso, already noticed. All the land between is high, and there are some little coves, and several watch-towers, but no anchorage. From Cape Bianco, 2½ miles E.N.E. ¼ E. [*N.E. ½ E.*] is the *Island Giraglia*, already described on page 75.

The *Punta Corna di Becca* lies a mile to the eastward of Cape Bianca *(White Cape)*; it is elevated, and within it are seen the lofty mountains of the interior. At rather more than a mile to the eastward of this point, and nearly on the meridian of the Isle Giraglia stands the Tower of *Tolare*, on the eastern side of which is a rivulet, which falls from the mountains. Two miles farther east is *Boccaggio Point*, the northernmost point of Corsica.

VII.—The ISLAND of SARDINIA.

GEODETIC POSITIONS.	Latitude.				Longitude E.		
Cape Della Testa; the turret	41°	14′	28″	..	9°	8′	15″
Castel Sardo	40	55	0	..	8	42	30
Porto Torres, the Port of Sassari	40	50	40	..	8	22	30
Cape Falcon	40	59	15	..	8	10	40
Isle Asinara; N.E. extremity	41	8	.0	..	8	18	15
Trabucato Point; the tower	41	4	4	..	8	18	53
Cape Argentaro	40	45	0	..	8	4	0
Cape Caccia	40	33	30	..	8	5	0
ALGHERO	40	32	40	..	8	15	30
Cape Marargiu	40	19	40	..	8	20	30
Cape Mannu	40	2	0	..	8	20	30
Cape S. Marco, the N. point of Oristano Bay	39	51	0	..	8	24	0
Monte Arcuentu, or *Finger of Oristano*	39	35	0	..	8	30	30
Isola S. Pietro; old tower on the summit	39	9	30	..	8	15	45
Il Toro, or the Bull Rock	38	52	0	..	8	23	0
Cape Teulada	38	51	40	..	8	36	40
Cape Spartivento	38	52	30	..	8	50	40
CAGLIARI; Molehead Battery	39	12	13	..	9	6	44
Cape Carbonara; Cavoli Tower	39	4	0	..	9	32	0
Cape Ferrato; N.E. extremity	39	19	0	..	9	39	40
Cape Bellavista; watch tower	39	59	30	..	9	44	30
Cape of Monte Santa (height, 2,400 feet)	40	9	0	..	9	45	30
Cape Comino	40	31	40	..	9	49	30
Isola Tavolara; East point	40	54	10	..	9	44	30
Cape Figari; summit	40	59	20	..	9	38	45
Isola Mortorio; S.E. point	41	3	50	..	9	36	0
Isola Caprera; North point	41	14	30	..	9	28	0
Isola Madalena; North point	41	16	0	..	9	25	0
La Presa di Santa Maria	41	18	30	..	9	22	45

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The ISLAND of SARDINIA (Isola di Sardegna) is 46 leagues in length, from North to South, and its mean breadth is about 21 leagues. The interior is highly mountainous; the general direction of the mountains is from north to south, and the highest summits are commonly covered with snow. It is divided into two provinces, the *Capo di Sopra*, or *Sassari*, to the north, and the *Capo di Sotto*, or *Cagliari*,* to the south. The former is the most hilly, but both contain mountains, lakes, rivers, cascades, and other beautiful features of landscape, in all imaginable variety. The general elevation of the mountains is from 1,000 to 3,000 feet; but the *Peak of Limbarra*, in the N.E., is 3,686 feet; and that of *Genargentu*, half way down the island, toward the east, is 5,276 feet above the level of the sea. The chief rivers are the *Tirsi*, or *Oristano*, running to the west; the *Coguinas*, to the N.W.; and the *Flumendosa*, to the S.E. These, with their tributary streams, pervade great part of the island; and there are many more, of inferior consequence, which, on all sides, fall into the sea.

The forests, in the mountainous parts, are numerous and extensive, and many large tracts, capable of cultivation, are utterly neglected; and yet, says Captain Smyth, "Sardinia, geographically considered, is singularly favoured by its climate and position; and its resources in agriculture, mines, and fisheries, are sufficiently abundant to have elevated it to the greatest prosperity and opulence."

Of the extensive and fruitful plains, the larger are termed *Campidani*, and the secondary, *Campi*. Large sandy or stony districts, called *Macchie*, are estimated to amount to one-third of the island; a similar extent to the forests and pastures; and the remainder to corn-fields, vineyards, olive-grounds, orchards, and gardens, for the subsistence of a population of 480,000 persons. The mean temperature of the climate is about 60½, the thermometer varying from 34° to 90°, but the weather is proverbially variable, as to heat and cold, though hail and thunder-storms seldom occur.

The morasses and low lands produce pernicious exhalations; and many tracts, screened from the winds by the high lands, exhale a poisonous *intemperie*, or *mal'aria*. The most fertile plains are toward the south, and produce fine wheat, of which much is exported, with barley, beans, lentiles, &c. The tall palm decorates the forests, and there are groves of wild olive-trees. Vines, with the orange, lemon, citron, fig, pomegranate, and the ordinary fruit-trees of Europe, are very fine and abundant. Peas, cabbages, and asparagus, grow wild in the greatest luxuriance. The mineral riches of the island were well known to the antients. At present lead is the most abundant of its ores. In the northern mountains are found porphyry, basalt, alabaster, marbles, cornelians, sardonyx, turquoises, amethysts, &c.

The most prevalent winds are the N.W. and the East, the first of which is the healthiest. The sea-breezes [*imbattu*] which usually blow in toward noon, are exceedingly refreshing during the heat of the day; they fall calm as the sun goes down, and are succeeded in the evening by the *rampinu*, or land-wind. N.E. winds bring heavy rains; and the east wind, or *bentu de soli*, (the coming of which is indicated by clouds gathering on the summits of the mountains,) is usually accompanied by very vivid lightning; and from its being loaded with vapours, becomes extremely disagreeable after a long continuance. The *maledetto levante*, a S.E. wind, complained of by the natives for its debilitating effect, is the scirocco of Sicily; while the north wind, from its opposite quality, is called the *serche*, or dry wind. The *intemperie* differs from the malaria of Italy, it being pernicious at all times, wherever it abounds, and strangers landing for a few hours only have been almost immediately carried off by its virulence; indeed, the very breathing of the air by a foreigner at night, or in the cool of the evening, is considered as certain a death in some parts as if he had swallowed some poisonous drug. Whilst the atmosphere is in this state, the natives never move abroad until an hour after sun-rise, and they hasten home before sun-set, carefully closing every door and window; or, if obliged to be out, hold a handkerchief before their mouth. The extreme heat of the day is also carefully avoided, for they are very apprehensive of the "*colpo di sole*," or stroke of the sun, attributing its frequency and fatal effects to the malignity of the intemperie. There exists, besides, a fear of the "*colpo d'aria*," from the change of temperature occasioned by the sun becoming suddenly overcast, or by abruptly moving out of the sunshine into the shade. Exposure to the evening dew is said to bring on a severe head-ache, called *micrania*, much dreaded as a fore-runnner of intemperie.

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* Pronounced *Kal-yi-a-ri*.

Most

Most of the people remove from the plains to the higher grounds on St. John's day in June, when the air begins to be unsafe, though it does not become very dangerous until August. Those who, from their circumstances, are obliged to remain, keep themselves well clad in thick woollens, to avert the ardent rays of the sun. Exertion, exposure to summer showers, and fatigue of every kind, are studiously avoided; and a spare but good diet adopted, with cool acidulated drinks. Many Sards entertain a notion that the green figs of infected districts imbibe and evolve the deleterious principle of intemperie; it is, therefore, customary in the markets, to express the place of their growth on the baskets.

Pastoral habits have induced indolence, and these islanders have an utter dislike to manual industry, as well as to the sea. Not only all the trade, therefore, is carried on by strangers, but even the fish on their coasts, and in their harbours, is caught by Sicilians, Neapolitans, Tuscans, and Genoese. Soap, stationery, drugs, spices, glass, pottery, furniture, and every article of dress, are imported. Though possessing so much rich ore, iron and steel bars are also supplied from abroad.

Of the exports, the chief is wheat, though subject to a heavy duty. As compared with wheat, barley is of an inferior quality. The wine trade has become a profitable branch of commerce. Salt is an important article of export, but it is a royal monopoly. The bullocks of Sardinia are of a small size; the beef and pork are excellent; mutton tolerable. The woods and forests abound with stags and all sorts of game.

The fisheries have been very productive; but, as above-mentioned, they are almost entirely managed by strangers. There are *Tonnare*, or establishments for taking the tunny-fish, at the Saline, on the north coast, and several places on the west. The schole annually enters the Mediterranean early in the spring, skirts along the shores of Spain and France, then descending by Corsica, some escape through the Straits of Bonifacio, while the rest pursue their course toward the Black Sea, round the south end of Sardinia, but tarry there from April to July. Both the sword-fish and anchovy are now become scarce here; and the same may be said even of the sardines, formerly so abundant.

The chief towns are, *Cagliari*, the capital and chief emporium, on the south, having about 26,000 inhabitants: *Sassari*, inland, on the N.W., with upward of 20,200: *Iglesias*, in the S.W., with 9,500: *Tempio*, inland, to the north, with 6,000. The coasts are defended by a line of stout towers, garrisoned by soldiers called *torrari*.*

The NORTH COAST.—Cape Longo Sardo is the northernmost point of Sardinia, and its distance from the nearest point of Corsica is two leagues. It is a bold cliffy head-land, with the rocks and islets of *Marmorata* on its eastern side. At two miles to the west of it is the round tower of *Port Vecchio*, or *Longo Sardo*; the latter, an iron-bound inlet, with a sandy beach at the bottom of it, near which is a small mole: a new town, *Santa Teresa*, is rising here. The extremity of *Cape della Testa*, is at a league W.N.W. [*nearly West*] from the mouth of the inlet. This cape is a high granitic mountain, connected to Sardinia by a sandy isthmus, and having on its highest summit a deserted turret. On its western side is the small chapel of *Santa Reparata*. The turret on the summit stands in latitude 41° 14′ 28″, and longitude 9° 8′ 15″. It commands a fine view over the whole strait.

CAPE DELLA TESTA was the ancient *Erebantium Promontorium*. Its western face is composed of strongly marked rugged cliffs, with several rocks above water at its base, but steep-to. On the north point is a cove, *Cala Spinosa*, and near it are some quarries, where fine granular stone may be obtained, and whence the columns were taken for the Pantheon at Rome.

From the extremity of *Cape della Testa* to *Monte Rossa*, a bold head-land of red granite, the bearing and distance are S.S.W. [*S. ¾ W.*] 5½ miles; and to Point Vignola, S.W. ¼ W. [*S.S.W. ½ W.*] 7½ miles. At the foot of Monte Rossa is the *Isoletta*, a barren rock. On each side of the cape is a long tract of sandy land. Thence to the westward, an indented beach, with an islet off it, named *Canello*, extends to the little port of *Vignola*, whither coral boats repair for water and shelter, and lie tolerably secure near a round tower.

The space between Sta. Reparata and Vignola is a barren waste; but, at the back of

* All vessels sailing from the United Kingdom for ports in the Sardinian states will be required to perform a quarantine of twenty-one days, and to discharge their cargoes into the lazaretto. Vessels arriving from ports known to be infected with the cholera will perform the said quarantine at the lazaretto of Varignano, in the Gulf of Spezzia.—*Sardinian Consulate*, 6th March, 1832.

Vignola

Vignola is a fine valley, with beautiful wild olive-trees and vines, fertilized by a river meandering through it, the banks of which are literally covered with tortoises. Bounding these grounds are the precipitous crags of *Monte Cucuru*, commanding a great extent of coast.

From Point Vignola, a steril iron-bound coast, of forbidding aspect, the land trends south-westward, 9¼ miles, to *Cape Monte Fava;* then follows a cove ending in the point and tower of *Monfronara*, off which lies a bare rock, *Isola Rossa*. Here a delicious plain opens to the view, with the *River Coguinas* winding through it, and forming a lake where it enters the sea, by the solitary chapel of *S. Pietro di Mare*. Inland, at the south part of the plain, stands *Castel Doria*, a well-built square tower, on an insulated mountain. Westward of this plain, the coast is broken by picturesque volcanic cliffs, on which, at the height of 300 feet, stands the fortified town, *Castel Sardo*, which occupies the summit of a steep rocky pinnacle immediately over the sea. Both the town-wall and the dwellings are built of lava, and there is a citadel on a crag to the S.W. The streets are partly cut in steps, and partly on the flat face of the rock, every where slippery and dangerous. The inhabitants are very poor, and of a bad unsocial character. Between Longo Sardo and this place, in a distance of more than 30 miles, a few huts constitute the only habitations on the coast.

At the foot of the cliffs, on each side of Castel Sardo, are little bays, forming anchorages for boats. A rivulet falls into that on the S.W. The *Sardo Rock*, a dangerous shoal, lies at about six miles N.N.E. ½ E. [*N.* ¼ *E.*] from the high steeple of Castel Sardo, with the Isle Rossa, near Cape Monte Fava, bearing E. by S. [*E.* ¼ *N.*] 6½ miles. It has 4 fathoms on it, and from 20 to 30 around. Within a mile of Castel Sardo are two other rocks, with 7 and 8 fathoms over them, which produce over-falls during northerly winds.

CASTEL SARDO WESTWARD.—To the westward of Castel Sardo the coast trends W. ¼ S. [*W.S.W.*] 4 miles to *Point Canemato*, and is bordered with sunken rocks, and some above water. The coast hence westward becomes low, and displays an inland town, *Osilo*, which stands on a mountain upward of 2,000 feet in height. Between this town and the shore are the villages of *Sorso* and *Sennori*, the inhabitants of which cultivate tobacco, the vine, and corn, in the valley of *Logulentu*.

PORT TORRES, the antient *Turris Lybisonis*, lies at the distance of 11½ miles W. ¼ N. [*W.N.W.* ¼ *W.*] from Point Canemato. This place is a small haven of two moles, defended by an octagon tower, which stands in lat. 40° 50′ 31″ long. 8° 22′ 51″ E. It will admit a few small vessels, but those of burthen must lie in the road, nearly a mile outside, where the anchorage is pretty good. At a short distance, southward of the town, on a gentle acclivity, are the church and hamlet of *St. Gavino;* and at 9 miles inland, is the city of *Sassari*, with its twenty-four churches. There are more Roman vestiges hereabout than in any other part of Sardinia.

From Porto Torres the coast trends to the westward, and thence to the north. At two leagues beyond the port is the *Lake Pilla:* beyond which, to the northward, are the lagoons where salt was formerly made, and where stand the tower and tonnara of *Salinas*. Here is an excellent boat-cove, frequented by the gentry of Sassari, at the time of the *Mattanza*, or net-drawing. A great tract of land, at the back of the beach, between Porto-Torres and this place, is literally a desert, bounded inland by the Nurra mountains.

CAPE FALCON, antient *Gorditanum*, is the northern extremity of the district called the Nurra. It has one tower on its highest summit, and a second stands on an islet at its base, named *Pelosa*. Sardinia is here divided from the island Asinara by narrow shallow straits, between which lies the low flat isle of Prana or Vana, which has a tower on its north coast. In these straits may be seen innumerable quantities of the little *Nautili*, floating on the surface of the water.

ASINARA [ant. *Hercules Insula*] is an island of the most irregular form, 10 miles in length from N.E. to S.W. It is wholly mountainous, nearly intersected, on one part, by two ravines, and abounds in tortoises of the largest and best kind, goats, &c.; on the hills wild olive-trees, and the vales good pasturage. The approach from seaward is bold on all sides. It has several good boat coves; and, on the eastern side, is the convenient anchorage of *Trabucato*, for vessels of any size, off the ruins of a deserted village and tonnara. On Trabucato Point, eastward of this anchorage, is a round tower, erected for the defence of the fishery, and of the Cala Levante, a sandy cove, on the east of it. The tower stands in latitude 41° 4′ 4″, and east longitude 8° 18′ 53″.

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The north and west coasts of Asinara are high and steep. The most elevated summit, *Monte Scommunica*, is nearly 1,500 feet above the sea. From the northernmost extremity, *Point Caprara*, Cape della Testa, at the entrance of the Strait of Bonifacio, bears E. ¾ S. [*E. by N.*] 38 miles.

WESTERN COAST.—The western coast of the NURRA, or N.W. district of Sardinia, is very steep; there being from 30 to 50 fathoms of water within a mile of the shore, and no bottom at 500 or 600 fathoms a little farther out. *Cape Falcon*, already noticed, has a white rocky line, trending south-westward to *Point Coscia di Donna*, a distance of 2½ miles; and thence, to an equal distance south-eastward, along the *Costa Redondada*, between which and the tonnara of the Salinas is a flat plain. At a mile farther, southward, is a high rock, *Isola de' Porri*, or Isle of Leeks, whence the land gradually rises to *Cape Negretto*, a tabled cliff, with a cove, *Acqua di Cervo*, at its base.

A bold coast continues to *Cape Argentaro*, in latitude 40° 45′. This cape is the extremity of a rocky mountain upward of 2,000 feet in height, covered with brush-wood and wild olive-trees; beyond it, on the south, is a bay with low shores, over which the city of Sassari may be seen from the offing. On the N.E. side of the bay is a cove for boats, defended by the *Rotunda*, a tower on a gentle hill, flanked by another, that of Spanga.

At a league farther south, is a small spot called *Porticiolo*, defended by a tower. This is followed by the bold and picturesque cliffs of Monte Ghiscera, which terminate at *Cape Caccia*, (ant. *Hermæum prom.*) a noble head-land, upward of 500 feet in height. Between the two, on the highest summit of *Monte Timidona*, is the Torre della Penna, much shattered by lightning; and off this part of the coast are two insulated steep rocks, of which the southern one, *Foradada*, is perforated. Ships may round Cape Caccia at any distance, it being very bold, and then enter the excellent harbour of *Porto Conte*. The latitude of Cape Caccia is 40° 33½′, and its longitude 8° 5′ E.

PORTO CONTE, which is formed on the west by the elevated land which is terminated by Cape Caccia, is two miles broad and 3½ miles in depth. This harbour, though exposed to the S.W. winds, is perfectly safe for frigates, by bringing up in from 6 to 10 fathoms. Smaller vessels find still better shelter by running to the N.E. of a martello tower, *Torre Nuova*, and anchoring in 3 or 4 fathoms, on a bottom of sand and shells over muddy clay. The Torre Nuova, which is on the eastern side, is the only one in the harbour that has a garrison, nor are there any other inhabitants; but refreshments and wood may be had from Alghero, 7 miles to the eastward, and water from some pools and wells at the head of the bay. The first tower inside Cape Caccia is called *Bollo*, and close to it is an excellent cove for landing.*

To the eastward of Porto Conte is *Monte d'Oglio, or Olio*, a conical mountain, nearly 1,400 feet high, and under which is a rivulet that flows nearly all the year, whence water for shipping may be obtained. From the head of the harbour, the ground of which is foul, a fertile plain extends to Portociolo and the Nurra Mountains, across which, in winter, N.W. winds blow with great violence.

Following the coast from Porto Conte, rocky cliffs are seen extending eastward, 2½ miles, to *Point Galera*. The fissures of these cliffs afford shelter to thousands of wild pigeons. Beyond Point Galera, and to the southward of Monte d'Oglio, is a cove defended by a round tower, and having a lazaretto for quarantines of observation. Farther on, the coast forms a bay, with the *Lake Caliga*, abounding in excellent fish. The adjacent grounds are covered with the *palmizza*, or fan-palm, of which so much use is made, as an article of food, that it is termed the "*manna of Alghero.*"

ALGHERO.—The city of Alghero bears from the extremity of Cape Caccia S.E. by E. ½ E. [*E.* ¾ *S.*] 8 miles; and from Point Galera, S.E. ¾ E. [*E.S.E.* ½ *E.*] 4 miles. It is very pleasantly situated, on a low rocky point, jutting out from a sandy beach, and defended by bastions and towers. It is entered by a gate at the mole. The cathedral is a conspicuous and spacious edifice. The streets, though narrow, are clean and paved, and the inhabitants are esteemed as more agreeable than those generally in the other

* Nearly opposite Foradada, above-mentioned, is an extensive and magnificent grotto called *Antro di Nettuno*. Near the Torre Bollo, on the brow of a hill, is a very singular cavern, called the *Tragonaja*. Both are described by Captain Smyth, in his copious and accurate volume, entitled "*Sketch of the present state of the Island of Sardinia*," a work to which we are most especially indebted for the description of the coast.

cities

cities of Sardinia. There is a tolerable market for provisions, and several fountains of pure water outside the town, but within the walls the dependence is upon cisterns only. The country around is well cultivated, and interspersed with large gardens and orchards. Wines are the chief products. Butter, cheese, vegetables, and fruit of most kinds, are plentiful, and tobacco is extensively cultivated here.

From Alghero, the coast trends South [*S. by E.* ½ *E.*] 4 miles, to the Point and Tower of *Poglino;* and the intermediate land presents a range of gentle hills, planted with vineyards, and backed by the mountains. Point Poglina has a deserted turret on its acclivity, and off its base is a bare rock frequented by sea-birds. Eastward of it is a rocky spot resorted to by the Neapolitan coral fishers, who annually commence their operations in the spring, and terminate them on the festival of St. Rosario, the first Sunday in October.

From Poglina, *Cape Marargiu* bears S. ½ W. [*S. by E.* ½ *E.*] 9½ miles. The coast between is concave, steep, and tabled, with partial patches of corn, and gradually rises eastward to the high summits of *Monte Minerva*, the woody ravines of which abound with wild hogs, deer, and mufflons.* Off Marargiu is an islet of moderate height, and the coast south-eastward, for more than a league, is composed of cliffs, extending to *Point Mora*, on which the ruined tower of *Argentina* may be seen.

BOSA.—At two miles to the south-eastward of Point Mora, are the islet and tower of Rossa, at the entrance of the River Termo [ant. *Temus*]. The islet is fortified with a round tower, which stands in latitude 40° 16′ 40″, longitude 8° 25′ 31″. At a mile and a half eastward from this, on the north bank of the River Termo, are the town and bridge of Bosa; the appearance of which, with the various churches and convents, from the offing, is very pleasing. The town is tolerably clean, several streets are paved, but it stands in a close valley, on the muddy banks of a sluggish stream, and in summer is fatally unhealthy.

Between the islet Rossa, and the shore, small vessels lie in tolerable security; but boats and small craft take shelter inside the river, in a berth where fine fish are easily taken.

At about a mile to the southward of the Termo, or Bo River, is a place called *Pietra Niedda*, whence timber is exported to Toulon and Genoa. Half a league southward from Pietra Niedda, is the small town called *Tres Nuraghes*, the vicinity of which is noted for its grain, cattle, honey, cherries, and other fruits, and particularly for its new milk cheeses, "*frescas*," the best in the kingdom. The coast continues to trend southward, and presents the towers of *Colombargia* and *Iscala Ruia*, or Red Landing, between which are four rocky islets. The coast beyond the tower of Iscala Ruia presents tabled cliffs of compact lava, and continues along the base of *Monte Ferru*, a noble elevation of 2,796 feet.

CAPE MANNU, the southern point of the Bay of Bosa, lies at the distance of six leagues S. by W. ½ W. [*South*] from Cape Marargiu, the north point. N.E. from the cape is the low islet *Pelosa*, with ruins on it, and surrounded by a shoal of sand and rocks. Cape Mannu has a white round tower, on a tabled cliff of moderate height, which declines to the eastward, so as to give it the appearance of a gunner's quoin. There are four other towers between this and Iscala Ruia. South of the cape, the sandy cove of *Inchiudine*, affords anchorage with off-shore winds, in 8 or 10 fathoms. Here are salterns, and much salt is exported.

At a league from Point Mora, the S.W. extremity of Cape Mannu, lie the flat islet and rocks called *Mal di Ventre*. The islet is triangular, and shelves to the N.E. and S.W. At two leagues S.S.W. of Mal di Ventre, is a small black rock, *Coscia di Donna*, having deep water close to it, excepting a reef at the N.E. end. The distance between these rocks and the coast is from 4 to 5 miles; the channel is perfectly safe for the largest ships, and the water deep, being from 20 to 13 fathoms.

CAPE ST. MARCO, a tongue of land, having a tower on a conical hill, and another on its eastern side, forms the north point of the entrance of ORISTANO BAY. The cape lies in latitude 39° 51′, and is 11 miles to the southward of Cape Mannu.

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* The *Mufflon*, or *Mufion*, (Greek *Ophion*,) is a ruminating animal, frequenting only the highest and most secluded woods; where, from its timidity and fleetness, it is with difficulty shot. The form of the head, ears, legs, and hoof, identify the mufflon with the sheep, although in size it is rather larger, and clothed with hair instead of wool. See Capt. Smyth's "Sardinia," p. 120.

ORISTANO BAY.—This is the largest and best bay on the Western coast of Sardinia, but it is open to westerly winds. *Cape St. Marco* on the north, and *Cape Frasca*, on the south, are its outer points; and the distance between these is five miles, with 10 to 15 fathoms of water. There are reefs tailing out a little way from each point. In the bay, ships have excellent anchorage during off-shore winds; but westerly winds blow full in, producing a great sea and surf; nevertheless, two or three vessels may lie securely, in 6 or 7 fathoms, by rounding Cape St. Marco, and bringing up to the eastward of the two towers; or, if running from a southerly gale, by standing inside La Frasca to a similar depth. In either case it is, however, requisite to remember, that reefs surround each point, as above-mentioned.

The shore of the Bay is formed by a beach bounding a succession of large lakes, and the River Tirsi [ant. *Thyrsus*] falls into the N.E. part. Directly off the mouth of the river are three shoals, but within them are from 4 to 6 fathoms of water. The eastern shore is also shoal. Here wood is obtained with difficulty; water in the summer is scarce; the air unhealthy: but cattle and refreshments may be obtained in any quantity, by embarking them at the *Torre Grande*, on the north shore, which is 5 miles to the north-eastward of Cape Marco, in latitude 39° 53′ 55″, long. 8° 28′ 40″ E.

The town of ORISTANO [ant. *Aureum Stagnum*] stands on a very unhealthy plain, 3½ miles true *East* from the Torre Grande. It is a busy commercial place, containing about 4,500 inhabitants; has a cathedral and several other churches. In winter and spring the country here has a smiling aspect; but, after June, the whole is a sun-burnt dreary waste, and the atmosphere pestilential.

Within the north shore of the Bay is an extensive lake, *Cabras*, having on its eastern shore a village of the same name, surrounded by gardens, orchards, and olive plantations. The lake abounds with excellent fish, but they are not eaten in summer, being then supposed to partake of the putridity of the stagnant waters. On the eastern side of the bay is the Campo or Plain of S. Anna, one of the richest plains in Sardinia, and in the lakes on this side great quantities of fish and aquatic fowls are taken.

Cape La Frasca, the south point of Oristano Bay, is long, flat, of moderate height, and falls abruptly on the northern side. On its eastern side is a tower, but it is not to be seen from seaward. From the cape, the coast southward continues flat, and of the same height for about two miles, where it is terminated by a point, with a high pinnacle off it, forming a small cove called *Porto Naviri*. Farther south are the point and tower of *Frumentargiu*, and a detached rock, beyond which is a sandy cove, with a royal tonnara, chapel, and battery. The shore thence is enriched with farms and cultivated grounds, backed by mountains, which are again surmounted by the rugged ridges of *Arcuentu*, one peak of which is 2,315 feet feet above the level of the sea. This peak, forming a distinguishing mark, is called the *Finger of Oristano;* it is remarkable from having strong breezes prevailing around it, and stands in latitude 39° 35′, longitude 8° 31′ E.

The coast hence southward, to the distance of about 7 leagues, is comparatively deserted, and assumes an appearance of life during the fishing-season only. The promontory named *Cape Pecora*, is 19 miles southward from Cape la Frasca, and has a tower upon it. Five miles farther south is a cove, *Cala Domestica*, defended by a tower; and, at 7 miles lower is the fishing village of *Paglia*, defended by a round tower on a low point. The N.E. winds here rush with incredible violence from the mountains, and are extremely injurious to boats and small craft. The chief place of this district is *Iglesias*, situate above a rich and salubrious plain, at about two leagues inland from the coast.*

From Porto Paglia an elevated coast trends nearly true *S.W.* to *Cape Altano*, where it commences a S.E. direction. Off Cape Altano lie three little rugged islets, named the *Porri Rocks*. By rounding these rocks, passing a small cove, *Paglietto*, and then keeping about a mile to the south, you arrive at the tonnara and fishing village of *Scus*, a poor place, defended by an excellent tower on a commanding point, with *Cadena*, an insulated rock to the W.S.W. of it.

ISOLA de S. PIETRO, or ST. PETER'S ISLAND.—The N.E. end of this island, [ant. *Hierakon*] lies at the distance of 3½ miles to the south-westward of Cape Altano; and its north shore, a line of steep cliffs, continues nearly in the same direction

* In the neighbourhood of Iglesias, is the singular cavern named the Grotta di S. Giovanni, or Grotto of St. John. See Capt. Smyth's "*Sardinia*," page 304.

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to the distance of five miles. The island is of a triangular form, of nearly an equal extent each way. The western side is high, and off its extremity is an islet named the *Gallo Rock*, about 30 feet high, with a passage between it and the main. On the eastern side is the small town *Carloforte*, and several salterns. On this side is a good road, well sheltered from westerly and N.W. winds.

Off the N.E. point of S. Pietro, is the islet *Piana*, and several rocks; and, at two miles from its S.E. coast, is the nearest part of the *Island of Sant' Antioco:* these islands thus form a spacious harbour, which affords secure anchorage with every wind, but its access is rendered difficult by a number of irregular shoals. Nevertheless, a stranger may easily enter by the southern channel, and anchor in 6 or 7 fathoms between S. Antioco and Carloforte, where smooth water will be found during gales from the N.W. If coming in from the northward, ships must borrow on Piana, in order to avoid a dangerous shoal in mid-channel, called *Secca de Marmi*, from a Swedish ship, laden with marbles, which was lost on it about a century ago. Fresh water may be had from wells and public cisterns, on the shore of the island, and plenty of wood, with refreshments, from the eastern shore.*

ISOLA SANT' ANTONIO.—This island, lying to the south-eastward of S. Pietro, is 9 miles long from north to south, and it forms the western side of the Bay of Palma. It was the *Plumbaria* and *Enosis* of antiquity. The surface is diversified with hills and valleys, and is noted for the geologic and mineral products which it incloses. On the northernmost extremity of the island is the *Cala Seta*, where there is a tower and village, in a very unhealthy situation, and a rock at a short distance from shore. The western coast, trending nearly north and south, is rocky, iron-bound, and generally bold-to. *Point Speroné*, the S.W. extremity of the island, is in latitude 38° 57½′; and at two miles to the S.E. of it is a quoin-shaped islet, named *La Vacca* (the Cow,) with a smaller, *Vitelli*, off its north end.

From Point Speroné the coast trends East, [nearly *E.N.E.*] two miles, to the point and tower of *Cannai;* and, at half a mile from it is a reef of three rocks, 15 feet below the surface, from which Cannai tower bears N.E. ¼ N. [*N.* 24° *E.*] The channel is otherwise clear of danger, and has from 13 to 20 fathoms of water.

Il Toro (the Bull; ant. *Boaria*,) a singular columnar rock, stands at the distance of 5½ miles, nearly true South, from Point Speroné. It is 500 or 600 feet in height, with abrupt sides, of difficult access, and friable materials. The summit is covered with a thick-set brushwood, which is a favorite resort of vast numbers of rabbits. Captain Smyth states its latitude to be 38° 51′ 58″, and its longitude 8° 22′ 44″ E., while the magnetic variation was found to be 17° 20′ 30″ W. The sea around is very deep, and between it and Vacca are from 30 to 40 fathoms of water.†

BAY of PALMA.—This is a very spacious bay, in which the ground is excellent, and the soundings regular, decreasing from 20 to 5 fathoms. Its entrance is open to southerly winds, yet it affords commodious anchorage for fleets in the violent S.W., West, and N.W., gales of winter, and supplies may here with facility be obtained for any number of ships. The best ground is on the western side, in 7 or 8 fathoms.

From Cannai Point, the S.W. Point of the bay, the coast, rocky and steep, trends

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* Capt. Smyth has given a very pleasing description of this island and its inhabitants, from which it appears that the latter are a people very superior to those of the opposite coast. The more elevated part of the island is to the northward, this being chiefly of rocky hills, with intervening patches and cultivated land, and offering a fine field for the mineralogist. The town, defended by a castle, is modern, and is moreover protected by the redoubt of *Vittorio*, a substantial edifice mounting eight guns, with a circular column on its summit, and standing in latitude 39° 8′ 28″, and longitude 8° 17′ 28″.

On the Isle Piana, off the N.E. point, is a church, and one of the finest tonnaras in the kingdom.

† In 1796, it was reported that the British cutter *Fox* had struck on a rock lying between 4 and 5 leagues South from Toro. It was in the day time, the water smooth, weather fine, the sea did not break, and she received no damage. On the 1st of November, in the same year, the Chichester sailed from Port Mahon for Corfu; on the 2nd she had a very strong breeze: but night coming on before they had made Sardinia, the ship was brought-to, fearing the danger: at half-past six, *a.m.* of the 3rd, the sea was seen breaking very high upon it, and it was judged to lie about South (by compass) from the Toro, 4 or 5 leagues.

Captain Smyth has declared, that all his researches to find such a rock were ineffectual; and that the coral-fishers had no idea that any such danger existed. The depths of water, in the part where it was supposed to exist, vary from 80 to 100 fathoms.

nearly true North, between 3 and 4 miles. The inhabitants frequently amuse themselves by taking wild pigeons in the grottoes of this coast, by means of nets and boats. At two miles to the northward of Cannai Point, is a small indent of the coast called *Maldrosia*, in which some fresh water may occasionally be obtained. The coast in the N.W. and North part of the bay is low and broken, forming islets connected at low water; and the *Bogaza*, or Strait between S. Antioco and the main, is entirely shoal. The town of St. Antioco, with its old castle, which may be seen on the western shore, contains about 1,800 inhabitants.

The Eastern side of the Bay is bounded by the main-land of the district of Sulcis, a country richly cultivated, and abounding in grain, pulse, and maize, oranges, lemons, cherries, apples, and other fruits. The cattle, also, are highly esteemed, as well as the horses, sheep, and swine. Great quantites of cheese are made here. In the N.W. extremity of the Bay is a sandy bight called *Gradano*, where small craft lie in perfect security.

On the S.E. side of the Bay is an insulated hill, extending to *Point Sarri*, a steep elevation of 130 feet. Beyond this, on the East, is *Port Pino*, a large sheet of water, and profitable fishery. The coast hence forms a slender bay, of 3½ miles, the extremity of which is *Point Piombo*, a bare sloping projection, with a round tower on a height, but below its summit. There is a small shoal, with 9 feet over it, at about one-quarter of a mile westward from the point, but with 12 or 14 fathoms close-to.

CAPE TEULADA, [ant. *Tegulare*,] a singularly bold headland, nearly 900 feet high, forms the eastern extremity of the Bay of Palma. The southern point of this cape bears from the Toro, or Bull Rock, nearly E.S.E. [*E. ¼ S.*] 11 miles; and from the Vacca, or Cow, S.E. [*S.E. by E. ½ E.*] 10 miles. It has a bifid or cleft summit, and declines on the north to a sandy isthmus, on which is a lake that deposits very fine salt. This is the southernmost land in Sardinia, and its outer point lies in lat. 38° 51½′, long. 8° 37′ E. The small bay or cove on the west of this cape is the *Cala Piombo*, and that on the east, *Cala Pilastro*.

BAY OF TEULADA.—The Bay of Teulada is the Bay formed by Cape Teulada on the west, and Cape Malfatan, a narrow neck of land, on the east. The bearing and distance between these capes are, E. ¾ S. [*E. ¼ N.*] 8 miles. In the middle of the bay, at half a mile from shore, is a flat and stony isle, presenting rocks of a red colour, and forming a useful harbour. This is called the *Isola Rossa*, and is resorted to by coasting vessels. At half a league westward of this is a rocky shoal of 9 feet, near a cove called *Scovo*. At the head of the bay is a shallow beach, bounding a lake that communicates with the sea, and is entered by the flat boats of the country. The Tower *Budello* stands on its western point.*

On the Harbour Rossa, the following remarks have been made and communicated by a British officer:

"This place takes its name from the little island by which the harbour is formed. It is not regularly inhabited. Seven or eight vessels may anchor in the harbour at a time, perfectly safe from all winds. You may enter either by the east or west end of the island; but do not run in with too much sail, as you must anchor about a cable's length inside the island; and I would recommend those who anchor here to steady their vessels with a kedge, or a hawser, to the shore, as the wind is variable in the night-time, though it blows strong in the offing. In the western passage you have from 6 or 7 to 9 fathoms; keep nearest to the island. In the eastern passage you have from 18 to 20 fathoms, grassy bottom, good holding ground. If you should be driven to the eastward of the island, and it falls calm, with a swell, anchor in time, as the bottom is bad, and the shore dangerous. At about 2½ miles to the N.E. of this island is another small island, with a number of sunken rocks around it, having only 6, 8, and 10, feet of water on them. I have sounded about it, and found it quite dangerous for any vessel to approach near it. Water may be had at Rossa, in a little river, [to the N.E.,] but no other supplies; you can land, but must first go to the tower which guards the bay, [on the north side,] and the officer will send a guard with you, whilst

* Captain Smyth adds, "Attracted by the fertility of the soil, a little colony of Sicilians were induced, a few years ago, to settle in this neighbourhood; but the *intemperie*, consequent on the very fertility which had so allured them, carried off the greater part. The survivors were happy to escape, with the loss of all their exertions in clearing the ground, building habitations, and other labour."

you

you procure water. You cannot go to the tower, or receive *pratique*, unless you have come from some other part of the island. It is dangerous to land without a guard from the tower, as the inhabitants, mistaking you for Turks, may otherwise happen to shoot you from the rocks." (1816.)

PORT MALFATANO, or MALFATAN, [ant. *Portus Herculis,*] is a snug harbour, formed on the east by Cape Malfatan, on which is a watch-tower. It is about a mile and a half deep, open to the south, with the two islets *Terredo* at the entrance. Its soundings regularly shoalen from 10 to 2 fathoms, and terminate at a sandy beach. There is good anchorage near the centre in 6 fathoms. This is a useful place of retreat with strong westerly winds.

CAPE SPARTIVENTO.—From the point of Cape Malfatan, that of Cape Spartivento bears S.E. by E. ½ E. [*E. by S.*] 2¾ miles. The coast of Spartivento is the base of rugged granitic mountains: and there stands, on one of the most elevated summits, at an elevation of more than 1,000 feet, some Cyclopean vestiges, now called the *Giant's Tower*. These remains, situate amongst bare cliffs, wild ravines, and desolate grounds, appear, says Captain Smyth, like a ruin of art amidst a ruin of nature, and they impart to the scene inexpressible grandeur. To the north, the mountains of *Capu Terra* form the great barrier, and finely contrast with the wide expanse of sea to the southward.

On the west of Cape Spartivento lie a cluster of rocks called the *Faraglioni*, and eastward of the cape are the cove and isle *Giudeo*. Here a low beachy shore, with lagoons, extends to the port and point of *Chia*, on which is a tower, 2½ miles eastward of Spartivento. The coast now trends, for 9 miles, in a true N.E. direction, and is a gravelly beach, backed by hills, in the woody clefts of which there is abundance of game. The *Torre Ostia* stands on the shore at 5½ miles from that of Chia; and, at 2½ miles farther, is that of St. Efficius.

The *Cape of St. Efficius* is a black conical crag, connected to the main by a low beach strewed with ruins. At a mile N.E. from the point is the steep islet and round tower of *St. Macario*, lying rather more than a furlong from shore, and forming a narrow channel. At a mile inland, N.W. from this place, on an insalubrious plain, is the town of *Pula*, on the site of the antient *Nora*.

GULF of CAGLIARI.—The *Bay* (improperly called *Gulf*) *of Cagliari* extends from Pula on the west, to Cape Carbonara on the east, a distance of about 24 miles, and about 12 in depth, with good anchorage all over it, after obtaining soundings.

From the Isle of St. Macario, above noticed, the Port of Cagliari bears N.E. by N. [*N. by E.* ½ *E.*] 12½ miles; Cape St. Elias, a promontory in the middle of the bay, N.E. [*N.N.E.* ½ *E.*] 12 miles; and Cape Carbonara E. ½ S. [*E. by N.*] 23½ miles.

From the port of Pula the coast trends in the direction of Cagliari, 3½ miles to the *Torre Saorra*. The tower of St. Macario protects the roadstead of Pula. Between the isle and a point to the northward, whereon the *Torre del Diavolo* is curiously built up against a hilly peninsula, vessels usually anchor for the purpose of watering, taking a berth in 7 or 8 fathoms, at about a mile from shore. Passing the rocky cliffs on which stands the Torre del Diavolo, we coast by the low point of Saorro, from which point a sandy beach trends along by the towers of Mezzo, Orri, Su Loi, La Maddalena, and the Scaffa, north-eastward to the River di S. Agostino and the mole of Cagliari. The whole of this narrow part is edged with a shallow bank extending some distance from shore.

CAGLIARI.—The *Stagno di Cagliari*, a considerable lake and excellent fishery, extends to the West and N.W. of Cagliari. The city stands on the side of a hill, and commands a view of the whole bay. Its appearance has a fine effect from the sea, but this is dissolved on landing, although there are thirty churches and many public buildings. The *Casteddu*, or castle, a triangular space, walled round, occupies the summit of a hill 400 feet above the beach, and has a citadel on the northern side. In the castle are the vice-regal palace, the cathedral, the university, and the public seminaries. That portion of the town called the *Marina* extends down the west face of the hill from the castle to the sea. Opposite to the Marina gate is the mole of the Pratique office, and there is a commodious *Darsena*, or pier-harbour, at the south angle of the town-wall, which may contain 15 or 16 vessels. The situation of the mole-head battery, as determined by Captain Smyth, is lat. 39° 12′ 13″, long. 9° 6′ 44″ E.

In the bay, before the town, shipping of every description may ride securely. They usually lie about a mile S.W. from the mole, in 6 or 8 fathoms, on an excellent muddy bottom.

bottom. The land-winds are here the most frequent and violent, especially those from North and N.W., which predominate nearly two-thirds of the year. From seaward the wind never blows home.

Provisions of all kinds are to be obtained at reasonable prices, but water is so scarce as to be sold at the doors of the houses. The castle is partly supplied from wells of extraordinary depth, by the constant labour of a number of men and horses, and partly from cisterns. Strangers must either go or send for water to Pula. The flat-bottomed boats of the bay make expeditious passages to and from that place, and may be hired on reasonable terms.

CAPE ST. ELIAS, a rocky point with white cliffs, about 250 feet high, divides the Bays of Cagliari and *Quartu*. The lazaretto, a respectable establishment, with a good mole to land at, but with very shallow water off it, is situate under the cape on the west. On the west point of the cape is a high building within a battery, originally intended for a light-house, but used only as a signal-tower, and named *Torre di Cala Mosca*. A redoubt, with square bastions, on the summit of the hill above, commands this cape and the valley below it. To the westward of the signal-tower is a round rugged rock, about 10 or 12 feet above the level of the sea, around which there is good fishing.

The BAY of QUARTU, extending to the east from Cape St. Elias, is bounded by a fine sandy beach, with round towers of defence upon it; but the space between the sea and villages consists almost entirely of lakes and salterns. The principal object here, on the Campidano or Plain, is the large village of Quartu. The bay is terminated on the east by a point, on which stands the *Torre de Foxi*, near which a rivulet disembogues that irrigates a fertile valley, which produces some of the finest fruits in the island, particularly figs and grapes.

To the south-eastward of Point Foxi the land again increases in height, and the interior rises into high mountains. Towers are erected on all the commanding points. At two miles beyond Point Foxi the *River Flumini* falls into the sea. At 13 miles S.E. by E. [*E.S.E.* ½ *E.*] from Cape St. Elias is *Cape Boi*, a moderately high bluff point; and, at half a league eastward of this lie the *Piscatelli*, a cluster of three low rocks near the shore.

CAPE CARBONARA is nearly 5 miles to the south-eastward from Cape Boi. The tower of Carbonara stands on a steep pinnacle, and commands the Bays of Campo Lungo on the west and Grugno on the east. Campo Lungo is also defended by a small castle, *Fortezza Vecchia*, irregularly built on a low rock. At a quarter of a mile from the cape is the *Isle Cavoli*, [ant. *Ficaria*,] half a mile in extent, noted for its wild cabbages, and surmounted by a ruinous turret.

EASTERN COAST.—At the distance of 5½ miles E.N.E. [*N.E.* ¼ *E.*] from Cavoli, and at a mile and three-quarters from shore, are the *Isles of Serpentaria*, of which the southern or largest is a long flat mass of granite, with steep sides, and a tower occupied by six soldiers. From this tower the next promontory to the northward is Cape Ferrato, bearing N.N.E. ½ E. [*N. by E.*] 10½ miles. The coast between is indented with several sandy coves, and may safely be approached. In the interior are the high mountains of *Budui*, and seven rugged peaks, called the *Sette Fratelli*, (Seven Brothers,) which are nearly 2,300 feet above the sea, form an excellent mark for strangers. These peaks are nearly on the parallel of, and 10 miles inland from, Cape Ferrato.

CAPE FERRATO is a rugged white point, 70 or 80 feet in height, and has a guard-house on a remarkable peaked hill about a mile to the westward. From the cape the coast trends north-westward and thence more northerly to *Corallo Point*, which bears from the extremity of the cape nearly N.N.E. [*N.* ¼ *E.*] 10 miles. It has, all along, a sandy beach. At 5 miles from Cape Ferrato is the *Torre Xalinas*, two miles inland from which are the church and hamlet of *St. Priamu*, whence a stream runs toward the sea, and terminates in a lake where quantities of fine fish are taken and sent to the market of Cagliari. The *River Flumendosa* falls into the sea at a mile to the southward from Corallo Point. In the summer season vessels anchor off the mouth of this river and receive oranges, lemons, cheese, pulse, grain, and wood, for Cagliari.

To the northward of the tower of Corallo is an elevated range, named *Monte Rosso*, extending nearly true North to Cape St. Lorenzo, which is 4 miles from Corallo Point. The tower of Arubil stands near the sea on the S.E. peak of Cape Rosso. Now follows a sandy beach, extending to the *Torre Murtas*, which is 4 miles from Cape St. Lorenzo. It appears that the *intemperie* has depopulated the whole district.

The

The *Chirra*, a cluster of rocks, lies at a mile from shore, and nearly two miles South [*S. by E.* ¼ *E.*] from Murtas Point. They are 30 or 40 feet high above the water, bold-to on all sides, and lie in latitude 39° 33′ 38″, longitude 9° 41′ 30″ E. *Variation* 18° 20′ W.

Point Palmeri, to the northward of the tower of Murtas, is high, and has a broad cliffy front. The coast hence trends nearly true North to the rugged headland named *Sferra Cavallo*, in a distance of 8 miles. At a league to the southward of Sferra Cavallo is the redoubt of *S. Gio di Sallara*, at the back of which is the extensive but unwholesome plain of *Sarrabus*.

The shore for about 3½ miles to the northward of Sferra Cavallo continues rocky, with peaked hills covered with trees. To this succeeds a beach of sand and pebbles, extending 6 miles to the tower of Bari, and thence again, 6½ miles, to Gemiliano tower, standing on a bluff headland nearly 300 feet in height, and at a mile to the northward of which is *Cape Bellavista*.

Capes Bellavista and Monte Santo lie nearly on the same meridian, at the distance of 10 miles. The intermediate coast forms a slender bay, called that of *Tortoli* or of *Ogliastro*, in the S.W. part of which is a lake of excellent water. Wood, wine, and provisions, are abundant here, but the anchorage is bad, and all but westerly winds cause a great surf. At 3 miles from Cape Bellavista, and three-quarters of a mile from the beach, are the two high islets of Ogliastro, with several rocks about them, nearly on a wash, but having 9 fathoms within a cable's length.

The whole space between Capes Sferra Cavallo and Monte Santo presents a charming cultivated plain, separated from the rest of Sardinia by chains of mountains, and studded by some of the best villages in the island, among which *Tortoli* may be distinguished by the cupola of its large cathedral: this village stands nearly on the parallel of Cape Bellavista.

Between Monte Santo and Cape Comino, a distance of 20 miles, is the *Bight of Orosei*. Dangerous cliffs and a ferocious race of people forbid an approach to the southern half of this extent. Beyond this, however, the shore becomes low and sandy as far as the town of *Orosei*, which is finely situated near the mouth of a rivulet, and surrounded by fertile plains, which afford an abundance of cattle, grain, cheese, honey, fruits, &c. remarkable for their superior qualities; but the atmosphere here is fatal to a stranger during several months of the year.

From Punta Nera, the extremity of the beach of Orosei, the coast trends nearly N.E. by N. [*N. by E.* ½ *E.*] to *Cape Comino*, a distance of 8 miles. This part is elevated, bordered with rocks, broken only by three small coves. Cape Comino may be readily found from the offing; as *Monte Albo*, a tabled eminence, about 2,317 feet high, stands a little inland from it, to the N.W., and shows its white limestone cliffs. In a fine plain, at the foot of this mountain, is the village and church of *Siniscola*.

Between Cape Comino and a point 4 miles to the N.W. the coast forms a small bay, that of *Siniscola*, which, though open to N.E. winds, is frequented by Genoese and Neapolitan feluccas, coming hither for cargoes of grain, fruits, honey, and cheese. A streamlet from Mount Albo runs into it.

The point last mentioned, 4 miles to the N.W. of Cape Comino is that of Sta. Lucia, which has a tower upon it. At 3 miles more to the northward is the old stone village of *Posada*, standing on the summit of a steep rocky hill. The inhabitants here mostly appear "as hard and as gloomy as their dwellings."

From Posada northward, to the distance of 20 miles, the country is described as a dreary blank, without other inhabitants than the shepherds who drive their flocks thither, for the scanty pasturage which it affords. *Point Sta. Anna* is 7 miles to the northward of Posada; and at a third of that distance from the latter a dangerous reef, the *Pedrami Rocks*, extend eastward to more than a mile from shore. The promontory named *Cape Coda Cavallo* is 6½ miles N.N.E. ½ E. [*N. by E.*] from Point Sta. Anna, and lies in latitude 40° 49′ 50″, longitude 9° 43′ 30″ E. To the northward of this cape lie the islands Molara and Tavolara, having a passage between them, in which vessels may anchor; but they must approach with caution, as the islets *Tauladetto* and *Ceroi* lie to the eastward of Molara. Tauladetto, the outer islet, is a conical red rock, quite bare of vegetation, and 60 or 70 feet high, and two miles from Molara; Ceroi is a smaller rock, at a mile and a quarter from the same. *Molara* is an island of granite, covered with brushwood, a mile and a half long, and contains a few inhabitants.

The

The ISLAND TAVOLARA [ant. *Hermæa*] is a narrow island, composed of limestone, and nearly 1500 feet high. It is three miles long from E.N.E. to W.S.W. *true*, and presents, at first, a series of inaccessible cliffs. The N.E. point is high and conical, and has just within it a cove like a dock, open to the N.E., but in which two or three vessels may lie in westerly winds, in 5 fathoms, muddy bottom. The position of the beach at the head is, lat. 40° 53′ 54″, long. 9° 43′ 36″ E. The S.W. part of the isle forms a semi-circular bay, called *Spalmador di Terra*, with a sandy beach, where vessels also anchor.*

GULF of TERRA-NOVA.—This gulf lies to the north-eastward of Tavolara, and is bounded on the north by *Cape Figari*, in latitude 40° 59′. To the southward, nearly on the meridian of Cape Figari, is *Cape Ceraso*, at the distance of 4½ miles. Around Cape Ceraso there is a dangerous shelf of rocks, which must be cautiously avoided. Westward of this is the port of *Terra-nova*, having a bar, without which there is good anchorage.

The Harbour of Terra-nova, designedly choked up during the hostilities of times past, is a fine expanse of water, 3 miles in length. The town at the head of it has a mean aspect; the whole country looks dreary and deserted, and the inhabitants correspond to the scene, being ferocious and wretched.

The country, for 5 leagues to the northward and north-eastward of Terra-nova, is an assemblage of high mountains; the coasts, exceedingly variegated and broken, form several good harbours.

CAPE FIGARI is a bold headland, terminating to seaward in steep cliffs, but gradually declining inland. On its south side is a little cove, *Cala Moresca*, whither boats resort to burn lime. The west side of this cove is formed by a high conical islet, *Figarello*, which abounds in wild olives, cabbages, peas, myrtle, juniper, and other spontaneous productions. A rocky shelf connects it to Figari.

Large ships may anchor to the west of the promontory of Figari, where they lie nearly land-locked. From this place, the island Tavolara, lying to the S.E. appears like a wall.

GULF of CONGIANUS.—The GULF of CONGIANUS is the large bay formed between *Cape Figari* on the south, and *Cape Libano* on the north. The distance between is nearly 3 leagues. The entrance is divided into two parts by a cluster of bare isles called *Li Mortarij*, of which *Mortorio* and *Soffa* are the chief. At the bottom of the bay, to the S.W., is the shallow port of *Congianus*, and eastward of this is another bight, the *Maranella*, with excellent anchoring ground in from 10 to 6 fathoms, but open to the N.E.

At a league to the North of the Mortarij, and half a mile from Cape Libano, is a smaller cluster, the *Rocks of Libani*. Beyond these, rather more than a mile to the N.W., is a little harbour, *Porto Cervo*, in which a ship may anchor, in 7 or 8 fathoms: but observe that, at half a mile to the north-eastward of the entrance, there is a rocky shoal of only 13 feet.

Inland, at 2½ miles S.W. from the entrance of Port Cervo, is a remarkable square inclined rock, called *The Pedestal*, upon the summit of *Mount Mola*, which is very useful as a sea-mark in navigating about this coast.

In the country which has lastly been described there are very few dwellings, huts excepted; and hence to *Cape Longo Sardo*, the north end of Sardinia, there is a succession of rugged granitic mountains, among which are forests of holm-oak, yew, juniper, and wild olives, intermixed with a thickset underwood, wherein great numbers of mufflons, deer, and wild hogs, may be found.

The INTERMEDIATE ISLANDS [ant. *Insulæ Fossæ*] are those which have been commonly called the *Maddalena* and *Barelino Islands*. These groupes are composed entirely of red granite, and they form with the main, several secure harbours, capable of containing fleets, and affording ingress and egress with any winds. The chief of the groupe is *Maddalena*, on the south side of which is a town with 1600 or 1700 poor inhabitants. The other islands have each a few temporary herdsmen only. Maddalena is about 11 miles in circuit, and has five forts for its defence, of which the principal, called *La Guarda Vecchia*, in the S.W., stands on an elevation of more than

* The scientific should read Captain Smyth's description of this island, in his "*Sketch of Sardinia*," page 235.

600 feet.

600 feet. The telegraph tower here stands in lat. 41° 13′ 27″, long. 9° 23′ 42″ E. Variation, 17° 56½′ W.

Caprera, to the S.E. of Maddalena, is 4 miles in length from North to South. It is high and irregular, and quite barren on the North and East. Near its centre is a peak, *Tagiolona*, upward of 750 feet in height, near which is a spring of pure water. In the coves on the coasts the Neapolitan fishermen take great numbers of fine cray-fish for the supply of the Italian markets.

Spargi, to the west of Maddalena, is high and covered with brushwood: it has two sandy bays, and a spring of excellent water near the *Cala Corsale*, on its western shore. Off Spargi, to the N.W., lies *Spargiotto*, a rugged barren islet, with a cluster of rocks off its N.W. extremity called *Spargiottelli*.

St. Stefano, to the south of Maddalena, is high, and has a small harbour on the south side, with a garrison of three or four soldiers. The promontory to the south of it is *Capo dell' Urso*, so called from its figure of a bear, looking to the S.W., formed by a natural mass of granite on the summit, and which is useful as a sea-mark.

In sailing about and among these islands attention must be paid to the '*raficas*,' or violent squalls from the hills; and it is considered as a sign of bad weather when Corsica cannot be seen; or, as the natives say, "when it has got its cap on."

The GULF of ARSAQUENA to the S.S.W. of Caprera.—The entrance to this gulf lies between the Island Caprera on the north, and *Cape Ferro* on the south. On the south side, near Cape Ferro, is a small low isle, named *Biscia* or *Biscie*, remarkable for the acontias, or little black snake, from which it received its name: from this island a reef extends to some distance E.N.E. On the opposite side, at 2½ miles from Biscia, is a cluster of rocks, above water, called the *Monaci* (Monks), which lie at a mile and a quarter from the middle of Caprera. The passage between them and Caprera is clear, and has, in mid-channel, more than 40 fathoms of water, diminishing to 20 on either side. The rocks are always above water, and may be approached, in any direction, within a cable's length.

At the distance of rather more than a mile *true* East from the Monks, is a reef on which H. M. ship *Excellent* struck, on the 20th of May 1804, and it should not be approached nearer than to 18 fathoms. The least water on this reef is 9 feet. The following bearings were taken when on the reef: the *Pedestal Rock*, a singular object already noticed, and Biscea Island in one, bearing S.W. ½ S.; the southernmost point of Caprera on with a remarkable peak or summit within the opposite shore, W.S.W. ¼ W.; and a remarkable gap on the west end of the island Tavolara, a little open to the westward of the high peak on Cape Figari, bearing South, [*S. 18° E.*]

The *Middle Reef* is between the Excellent's Reef and the Isle Biscea, and has, on its western end, only 20 feet of water. It extends from West to East nearly a mile, and the depths increase gradually, in this direction, to 13 fathoms. The western part, which is most dangerous, bears from Biscea N.E. by N. at the distance of three-quarters of a mile, and from the Excellent's Reef S.W. nearly two miles. The mark for the fair-way between the latter and Middle Reef is, a small hill on the coast, in the bottom of Arsaquena Bay, on with the middle peak of three, upon an inland mountain, bearing S.W. by W. ½ W.

Biscea Island lies nearly half a mile to the northward of *Cape Ferro*, and there is a good passage between, with deep water, 15 and 16 fathoms in mid-channel, but the rocks on the N.E. of the Island extend thence nearly half a mile, and should not be approached nearer than in 15 fathoms.

The leading-mark between the Biscea Rocks and the Middle Reef is, the southernmost point of Caprera in a line with a deep notch, on the top of a remarkable mountain, inland, bearing W. ¼ N.

In Arsaquena Bay there is a reef, having 3 fathoms over it, which bears from the southernmost point of Caprera S.W., about one mile, and from the Isle of Biscea West, 2½ miles. It should not be approached nearer than to 12 fathoms.

The general marks for knowing when you are clear to the eastward of the reefs, above described, are, the gap on the west end of the Island Tavolara open to the eastward of the high peak on Cape Figari, which is generally visible; and the Pedestal Rock, already mentioned, bearing S.W. ½ W. [*S.S.W. ½ W.*] The variation here, in 1804, was 18° 45′ W.

VIII. *The*

VIII. *The* COAST AND ISLANDS OF ITALY, *from the* GULF *of* SPEZIA *to* CAPE SPARTIVENTO.

GEODETIC POSITIONS.	Latitude.			Longitude E.		
Massa	41°	1′	0″	10°	11′	0″
Lucca; Torre dell' Ore	43	50	49	10	30	41
Viareggio	43	52	0	10	15	20
Mouth of the Arno	43	42	0	10	15	30
PISA; Astronomic Observatory	43	43	12	10	23	49
Melora Tower	43	33	6	10	12	45
LIVORNO or Leghorn; Lighthouse	43	32	30	10	17	10
Island Gorgona; Tower	43	25	30	9	54	0
Island Capraia; North point	43	4	20	9	49	30
Vado	43	21	30	10	27	0
Cecina; Fort	43	17	20	10	30	20
Bibona; Fort	43	14	15	10	32	5
Castegneto	43	10	43	10	32	14
San Vincenzo; Tower	43	6	58	10	32	42
Piombino	42	55	31	10	32	10
ELBA:—Porto Ferraio	42	49	9	10	19	40
Porto Longone	42	45	30	10	24	0
Cape Fetovaglia	42	44	0	10	8	30
Isola Pianosa; North point	42	35	0	10	7	30
Monte Christo; summit	42	19	35	10	20	0
Africa Rock	42	23	20	10	8	15

FROM PALMARIA ISLAND, which has been described on page 73, to the town of VIAREGGIO, in the Duchy of Lucca, the bearing and distance are S.E. ¾ S. [*S.E.* ¾ *E.*] 20 miles. From the mouth of the River Magra, to the same place, the bearing and distance are S.S.E. ½ E. [*S.E.*] 15 miles. The intermediate coast, which forms a considerable hollow, is altogether low, but the interior land is high, and a number of detached villages, with the towns of CARRARA and MASSA, may be seen from the sea.

In the Road of Viareggio the anchorage is very near the land, and the ground is very bad: besides, there is no shelter from the sea-winds; and, therefore, it is but little frequented. The port has, however, been improved by the formation of a mole for the reception of shipping. The town is inconsiderable. Inland, at 11 miles *true* East from it, is the City of Lucca.

The mouth of the RIVER ARNO, which river passes through the city of PISA, is 9½ miles to the southward of Viareggio. It is protected by a fort on the left bank or south side of the entrance. At Viareggio commences the low land, called the *Great Plain of Pisa*, over which, from the mouth of the Arno, you may see the celebrated leaning tower and the steeples of Pisa; hence also may be seen the village of *S. Pietro*, which stands at half a mile from the south bank of the Arno, 3½ miles from its mouth, with several canals and rivulets. All the coast from Viareggio, where the plain begins is a flat sandy shore, and some points stretch a great way under water, so that it is necessary to be very cautious on approaching.

PISA.—The CITY of PISA, which stands at nearly 2 leagues from the sea, was once the city of an independent republic, and it still exhibits some beautiful remains of its antient greatness, sufficient to reward the visit of a traveller. The air around is wholesome in winter, but unhealthy in summer, though the territory affords all the comforts of life, including plenty of corn and wine. The city is spacious, and is said to have contained, at one time, 100,000 inhabitants, now reduced to about 16,000. The increasing trade of the port of Leghorn, to the southward, has contributed greatly to the decay of Pisa.

LIVORNO, or LEGHORN.—In latitude 43° 33′, and 3 leagues S. by E. *true*, from the mouth of the Arno, is LIVORNO, the chief port of Tuscany, commonly, by the French, called *Livourne*; by the English, *Leghorn*: a barbarism sanctioned by custom.

It

It is a handsome, regular, and well-built, town, containing about 50,000 inhabitants, among whom Jews are very numerous. The land about it is low and marshy, but several canals about the town, by draining it, have rendered it fit for culture, and contributed to diminish the *malaria*, or noxious effluvia, which formerly prevailed. Fresh water is commonly so scarce that it is brought from Pisa.*

LEGHORN is well fortified, and has before it, on the west, two basins of considerable magnitude, which are shut by night with chains and a boom. The entrance is between two forts. Without the basin is a large mole, by the side of which vessels enter, and, when in, lie with their sterns toward it, with a cable fast thereon; and an anchor out a-head on a bank, on which the depth of water is not more than 7 or 8 feet. Lying in this manner, there is room for two tiers of ships, well sheltered from westerly winds. The largest ships lie nearest the mole-head, where there is 19 feet of water. To sail in, a vessel must pass between the shipping and the mole, astern of the tiers. The lighthouse stands on a clump of rock, without the mole, as represented in the figure annexed, and shows a fixed light, at about 170 feet above the sea.

Harbour of Leghorn, *with the Carrara Mountains in the distance, to the left.*

At the distance of 5 miles *S.S.E. true* from the mole, is the outer point of *Monte Nero*, having two towers upon it; and, on the coast, at half a league to the northward of this point, is the *Fort of Antignano*, situate on a low shore, which extends thence to Leghorn. From the point of Monte Nero, and trending to the north-eastward, the ridge of Monte Nero rises to a considerable height, and it terminates behind, or to the eastward, of Leghorn. Thus the port may be readily distinguished by those coming in from sea. On the lower part of the western side of Monte Nero, at nearly two miles to the north-eastward from the point, is the church and convent of *Madonna de Monte Nero*, with some houses near them: these form a useful mark.

The ROAD of LEGHORN lies with the mole bearing S.E. by E., and is sheltered from westerly winds by the *Malora Bank*, an extensive shoal of quicksand, which is 4 miles in length from north to south, and from a mile to a mile and a half in breadth; and the depths on it are from 2 feet to 3 fathoms. The ground on this bank, and that within it, in the road, is of mud and sand: but the outer edge and south end are rocky. Near the south end, the shoalest part, stands a square tower, with an archway, called the *Malora Tower*, a useful mark, from which the lighthouse bears E.S.E. 4 miles. Toward the bank is a gradual shoaling in every direction.

The *North Channel*, which is between the north end of the Malora Bank and the main land, is considered to be the best for large ships, particularly when coming in from the

* On the outskirt of Leghorn there is now an interesting and beautiful cemetery for Protestants. It is surrounded by rows of cypresses, willows, and other evergreens; and numerous monuments of Carrara marble adorn the interior. This cemetery has been used principally for the interment of the English who have died at Leghorn and Pisa, among whom are *Dr. Tobias Smollett*, *ob.* 16th September, 1773.

northward; there is, in its mid-channel, from 9 to 6 fathoms of water. A good leading mark is, the lighthouse in one with the third white house on Monte Nero: these houses are near each other, and near the convent of our Lady of Monte Nero, in a direct line between the lighthouse and the latter. In working in or out of this channel, stand toward the Malora into 5 fathoms, and toward the main-land into the same depth; in the latter case you will have the point of Monte Nero shut in with the lighthouse.

There are six shoal spots, or overfalls, in the Road of Leghorn, two of which have less than, and the others about, 4 fathoms over them: a berth should therefore be selected. The best anchorages are to the north-westward of the town, with the south end of the island Gorgona just open to the northward of the Malora Tower, and the lighthouse S.S.E. ½ E. or S.E. by S. in from 5½ to 7 fathoms of water, good holding-ground: another situation is with the Malora Tower W. ½ S. on with Gorgona Island; the lighthouse S. by E. and the mole-head S.S.E. in from 5 to 6 fathoms of water. You moor with the best bower to the westward, so as to have an open hawse with southerly winds, which send a heavy grown swell into the road, and cause the cables to thresh very much.

In heavy gales, from the southward and westward, the sea breaks on every part of the Malora Bank, and it is probable that the ground in the road banks in those gales; it is, therefore, always necessary to under-run the cables so soon as the gale is over.

To sail in by the South Channel, bring the lighthouse to bear E. ¼ S. [*E. by N.*] or nearly so, and keep it so until the Malora Tower is full a mile to the westward of you. You may then anchor at the Malora Tower W. by N. or W. ½ N., and the lighthouse S.E. by S., in from 6 to 7 fathoms, bottom of sand and mud; or you may haul up more to the northward, and take the station above directed.

If going-in this way by night, bring the lighthouse to bear E. by S., and take your soundings from the main, that you may certainly be clear of the Malora.

GORGONA.—Ships from the westward make the little island Gorgona, which is an excellent mark for those bound to Leghorn. This island, the antient *Urgos*, lies in lat. 43° 26′; and the lighthouse at Leghorn bears from it E. ¼ N. [*E.N.E.*] 18½ miles. It is high, appears almost round, and has two towers, with some fishermen's huts, and an old monastery or magazine upon it. Near its N.W. point is a sunken rock, but it is, in general, steep-to.

Appearance of Gorgona and the Malora Tower, bearing W. 10° S. from the anchorage of Leghorn.

Directions for Leghorn, *&c. from the Journal of Mr. Wm. Smith.*

To sail into Leghorn Roads from the northward, the marks to clear the north end of the Malora Bank are the southernmost hillock of the high mountains over the plains of Pisa, on with a small guard-house or tower [*Mezza Spigagia*] near the sea-side, bearing E. by S.; keep these marks on until you bring the lighthouse on with the first hill to the southward of Mount Nero Church, bearing S. by E. ½ E., which will lead you to the anchorage. You will have from 8 to 5 fathoms of water. It would not be adviseable to run through the knolls in the roads with a large ship and a heavy sea; but in smooth water, there is no danger, observing to keep the aforesaid hill on Mount Nero a little open to the eastward of the lighthouse, until within three-quarters of a mile of the latter: you will then be to the southward of the knolls, and may steer out S.S.W. or S.W. by S. In coming in through the North Channel, with a beating wind, stand to the main into 5 fathoms, and to the Malora into the same depth.

To sail in from the southward, give the Malora Tower a berth of one or one and a half mile; bring the lighthouse to bear about East by compass, or on with the south end of the town; then steer for it until the Malora Tower bears N.W.; you may then haul up to the north-east for the anchorage.

There is always a current setting either to the northward or to the southward, through the

the roads, which is much influenced by the winds; but no rise or fall of water that we could perceive.

Ships of war generally water at the lazaretto at the back of the town; you fill your casks in the boats with a short hose, which you fix on the end of a spout. Wood is plentiful, good, and cheap.

All kinds of meat and vegetables are very cheap, and fruit in its season: fish also are plentiful and cheap.

The following Remarks on Leghorn, &c. are from the Journal of another British Officer.

"On approaching the Roads from the southward, the soundings will be found from 20 to 10 fathoms. All the coast, from the point of Monte Nero (which is the southernmost point of the road) to the powder tower [*Torre Marzocco*], which stands on the beach to the northward of Leghorn, is bordered with rocks and shoals, which extend, in some places, half a mile out. The lighthouse stands on a ledge of rocks, extending to the westward half a mile from the S.W. part of the town-wall, and over which the sea breaks heavily in bad weather.

"Ships coming into the roads may have pilots by making the signal. No ships go into the mole without one; the channel being intricate and dangerous.

"Near this road, or in its neighbourhood, there is no shelter or place for anchoring; nor have ships much shelter here from northerly and southerly winds. A wind from N.E. to S.E. is directly off-shore; and with these winds the water is generally smooth, but very heavy gusts are not infrequent. With winds from W. by S. to N.N.W. the Malora Bank breaks off much sea.

"The city of Leghorn is surrounded by walls and ditches, on which an immense number of cannon are mounted. Boats may land within either the inner or outer mole, but the inner is generally preferred. The boom is always shut at sun-set. Leghorn is a place of great trade, particularly in the Newfoundland fishery. During peace, the Greeks export corn hither, in great quantities, from the Morea. The tide or current hereabout mostly runs to the N.W. and W.N.W. and it is sometimes very strong."

ISLAND CAPRAIA.—This island, antiently *Ægilon*, lies in latitude 43° 2′ between Corsica and the coast of Tuscany. It is nearly 4 miles in length from North to South, inhabited, and has a small fortress upon it. In case of necessity, small vessels may anchor off a cove upon its eastern side. Capraia belongs to Tuscany, and bears S. 26° W. [*S. 8° W.*] 7 leagues, from Gorgona; E.S.E. ¼ E. [*E. ¼ N.*], 17 miles, from Cape Corso; and S.W. ½ W. [*S.W. by S.*] 35 miles, from Leghorn.

Appearance of Capraia, bearing W.S.W. (by compass) 9 miles distant; taken in H.M.S. Aid, 1818.

LEGHORN to PIOMBINO.—At the distance of 10 leagues to the S. ½ W. [*S. by E.*], from the point of Monte Nero is *Cape Baratto*. The coast between forms a long but a deep bay, and its shore is generally low; but within, at the distance of about two leagues, is a ridge or chain of high land, which thence declines toward the sea. On the declivity a number of villages may be seen, particularly those named Castiglionello, Vado, Cecina, Bibona, Castiglioncello, Osteria, Campanella, S. Vincenzo, Donoratico, Campiglia, and Baratto. The last is on a small sandy harbour, at a mile and a half to the north-eastward of the cape.

CAPE BARATTO is a large high point, having a castle and tower on it, and there is a redoubt on a rising ground to the northward of the town. The cape, being connected to the main by a neck of low land, appears on both sides like an island.

In approaching toward the shore, at about 8 miles to the southward of Monte Nero, it is to be observed there is a rocky shoal, which bears S.E. by E. [*E.S.E. ½ E.*] 6½ leagues from

from the island Gorgona. It is said to have been once the town of Vado, now covered by the sea. The depth over it is from 9 to 15 feet, but near it are 6 and 7 fathoms. As it lies in the track of ships running along shore, it must be carefully avoided.

PIOMBINO.—At 4 miles to the south-eastward from the extremity of Cape Baratto is the town of *Piombino*, on the S.E. point of the promontory, which, with the island of Elba, forms the CHANNEL of PIOMBINO. Close to the end of the point between, is a great rock above water, with some others near it.

Piombino, the capital of a principality to which it gives name, was united to Tuscany by the general treaty of 1815. It is small, but well fortified, and has a citadel at nearly a mile to the eastward. The latter has a square tower, on a low point of rocks, within which is an anchorage, sheltered from N.W. winds.

BAY OF FULLONICA.—The Bay of Fullonica is a semi-circle formed by the coast between Piombino Point to the N.W., and *Cape Troja, (pr. Troya,)* to the S.E. The bearing and distance between these points are S.E. by S. [*S.E. ½ E.*] 12 miles. The north shore of the bay is low, sandy, partly covered with shrubs, and partly morass. At E.S.E. ½ E. [*East*] from Piombino Point, and intersected by a small rivulet, is the town of Fullonica, with its jetty. The whole of the bay is bordered with a shelf, from the edge of which the water gradually deepens. The *Torre Mozza* defends the coast at 3½ miles to the westward of Fullonica; and between these places are two reefs, at some distance from shore, which must be cautiously avoided.

The mouth of a lagoon, the *Lake Scarlino*, is two miles to the southward of Fullonica. Off this there is good anchorage, with muddy bottom, in from 5½ to 8 fathoms, with Cape Troja bearing S.S.W. [*S. ½ W.*] 6 miles distant, and in sight of the towers of S. Nicolo and Civetta, standing upon rocky points of land on the intermediate coast.

Cape Troja, in latitude 42° 47′ 30″, longitude 10° 45′ 40″, has a square tower standing on it, another a little way within it, and a village at the bottom, or landing-place. Off its extremity, at the distance of a mile, is an islet, the *Rock Troja*, which is high, and has a watch-tower upon it. From Cape Troja a reef extends half way over toward the islet, and some of its rocks are above water. There are also some rocks near the east end of the islet, so that the passage between must be dangerous to a stranger.

CHANNEL OF ELBA.—This channel is formed by the coast of Piombino to the N.E., and that of the island Elba on the S.W. The distance between the two is 6 miles. Between the north end of Elba and Cape Troja, and nearly in a line, lie the islets *Palmejola* and *Cervoli*, the first at 3 miles S.E. by E. ½ E., [*E. by S.*], from Cape Vita, the north end of Elba, and the second at 7 miles from the same cape. The islets are high; each has a watch-tower upon it; and from the north end of Palmajola there is a reef, but they are otherwise bold-to.

ISLAND of ELBA.—CAPE VITA, the northern extremity of this singular island, bears from the town of Piombino W.S.W. ½ W., [*S.W. by W.*], distant 6 miles. From Cape Vita the extent of the island to the south is 10 miles; its greatest extent east and west is 15 miles. Elba was the *Æthalia* of the Greeks, and the *Ilva* of the Romans; it is high, and is of very irregular shape. Its population probably amounts to 14,000. The climate is mild and pleasant, the air being cooled by the sea-breezes. Hence it produces plants and fruits unknown to grow on the main of Tuscany, notwithstanding its contiguity. It has no river, but a number of springs, and several rivulets. Of the latter, the chief is the *Rio*, on the eastern side, which rises by a town of that name, and runs, through the iron-mine of the same appellation, to the sea, at less than a league from its source.

The island abounds in lofty mountains, covered by numerous plants and shrubs, mostly odoriferous, which fill the air with fragrance. The soil is susceptible of great improvement. The trees most common are the cork tree, the green oak, the citron, orange, and all the fruit-trees known in Europe, the apple alone excepted. Its melons, particularly those termed *pastechi*, are excellent, and all the fruits are of fine flavour. The superior lands of the valleys and gently-rising eminences produce abundance of grapes, of which wines are made resembling the Spanish of Valencia and Catalonia; also olives, figs, maize, beans, peas, and a small quantity of grain: but, with all these, from want of industry, much land remains uncultivated. Pastures are rare, and the number of sheep, cattle, mules, and horses, small. Wood is scarce; but, owing to the warmth of the climate, little is required for firing. Different kinds of metals have been found in the island, including gold, silver, copper, iron, the loadstone, and lead: and of minerals, marble, granite, sulphur, vitriol, amian-

amianthus, stone for building, and slate. The iron mines have imparted celebrity to Elba; more especially those of Rio, on the eastern side, already noticed, and which have been very productive.

The chief ports of Elba are PORTO FERRAIO on the north side, and PORTO LONGONE on the S.E. Near Port Ferraio are salt-ponds. The fishery, the import of necessaries, or grain and clothing, and the export of fruits, wine, tunny, (caught about the island,) salt, metals, and minerals, particularly iron, make up, with agriculture, the sum of the commerce and industry of the population. Upon the western side of the entrance to Porto Ferraio is a brilliant harbour-light, which, from the elevation of the land, may be seen at a great distance.

The town of Porto Ferraio stands at the distance of 5 miles W.S.W. [*S.W. ½ W.*] from Cape Vita. It is seated on the western side of a small bay, upon a lofty mountain, commanding a fertile valley strewed with country-houses. Its streets are, most of them, terraces cut out of the rock, the houses handsome, and the population about 5000. Its port is capable of receiving ships of the line, but to them it is dangerous with northerly winds. The citadel and fortifications have great strength. Near the city, on the summit of a steep rock, within the port, is a small tower, called *Prosthina*, so situated as to be impregnable.

The town of PORTO LONGONE, on the S.E., takes its name from the shape of the harbour, which is long and narrow. This town is divided into Upper and Lower. The latter part of it, along the shore, is inhabited by fishermen, mariners, and merchants. The Upper town is comprised within the citadel. This, on the top of a mountain, is very strong by nature as well as by art. The entrance of the port, on the south side, is defended by a fortress, built on a tongue of land projecting into the sea.

ON ADVANCING TOWARD PORTO FERRAIO, the town will be seen, standing on the western side, as already described. The entrance of the harbour is a mile and a half in breadth. The western point, on which the town is seated, is high and steep: it is separated from the island by a canal, over which is a bridge. At about 500 fathoms to the north-westward of the town is a round islet, between which and the land you may pass in mid-channel without danger. At about half a cable's length to the northward of the islet are some rocks under water. On the south side of the town, within the port, is a little harbour, having a depth of 3 or 4 fathoms, which shuts up with a chain, and is capable of containing five or six galleys.

To sail into Porto Ferraio, give the western or town point a berth of two cables' length, in order to avoid some shoal spots which lie off it; and, when you open the mole, you may proceed to anchor.

The south and west sides of the bay are flat, but shoalen regularly; so that, by keeping the lead going, you may advance to what depth you please. The best anchorage is in from 9 to 7 fathoms, good oazy ground, at the distance of from 3 to 5 cables south of the mole. Galleys generally carry fasts ashore to the foot of the tower, at the entrance of the mole, or to the other side of the mole. Ships generally anchor farther out, in order to be in readiness for getting under sail.

There are salterns, or salt-ponds, on the low ground to the westward of the town, and some others within a point at the bottom of the bay, but the water is too shallow to permit a near approach to them. The watering-place is on the eastern side of the bay, near a point of rocks.

Winds from the N.W. and S.W. only, are troublesome here; but they cause no sea, because they blow over the land. Ships going in by night, must take care and not get entangled in the tunny-nets, which lie about half a mile E.S.E. from the lighthouse, and extend nearly half-way across the bay. Wood in this port is plentiful and cheap: fresh beef and vegetables may be had, but they are dear: fruits are plentiful in the proper season.

PORTO FERRAIO WESTWARD.—On proceeding westward, from Porto Ferraio, you pass *Cape Bianco*, a broad point, at a mile from the town, N.W. by W. ½ W. [*W.N.W. ½ W.*] Near to this cape are two shoals, on which the sea sometimes breaks. At nearly three miles more to the N.W. by W. is *Cape Infola*, the extremity of an arm of land, with some rocks about it, and which forms the eastern side of a bay lying beyond it. From Cape Infola the N.W. end of the island bears W. ½ N. [*W. by S.*] at the distance of 7 miles.

The Western Coast of Elba, which is foul and rocky, rounds to the south-eastward, as far

far as *Cape Fetovaglia*, which may be considered as the S.W. point of the island. The S.E. point is *Cape Calamata*, which bears from the former S.E. by E. ½ E. [*E. by S.*] 13 miles. The coast between forms five different bays, the second of which is that of *St. Pietro del Campo*, at a league and a half to the eastward of Cape Fetovaglia. At the bottom of this bay is the village of *Campo*, and near to it, on a rising ground, is the castle of St. Hilary: in this inlet galleys may anchor, and lie securely with land-winds; but S.E. winds blow full in, and then it is unsafe to remain there. When going in, approach the western point, on which is a tower, no nearer than a cable's length, as some rocks lie off it; but keep nearly in the middle of the entrance, and, when in, you may anchor against the tower, or farther in, at pleasure, and carry a fast on shore upon the point where the tower is: here you will find from 4 to 5 fathoms of water, on fine sand and mud. In the bottom of the bay, near to some houses, is a rivulet, where good water may be had. This place may be known, on approaching from the westward, by a large high point, with several white spots on it; afterward, at a little farther to the eastward, you will see the tower on the western point of the entrance, and then a sandy shore, with some cottages to the N.W. Off the eastern point are two rocks above water, one of which is two cables' length off.

From Cape Calamata, rounding to the N.E. and North, you will make the entrance of PORTO LONGONE, already noticed. The harbour is very deep, and has several places where ships and galleys may anchor. Upon the starboard side, on going in, is seen the citadel, standing on a point of rocks, which are steep-to; within this point is the anchorage. Opposite to the citadel is a small fort, *Castel Focardo*, which also serves to protect the entrance. E.S.E. winds blow directly up the harbour.

The outer point of the entrance of Porto Longone is half a league to the eastward of the town: at 2½ miles thence, to the N.N.E. [*North*] is the little creek *Ferriera*, noted for iron-mines, and which may be known by its store-houses, &c. You may anchor before these in 18 or 20 fathoms of water, but the ground is of coarse gravel, and not good for holding, and there is no shelter from the sea-winds. A watch-tower stands on the S.E. point, and near it is a large rock above water.

From Ferreira to the north end of Elba the distance is 4 miles. At half a mile from this end of the island is an islet, named *Topi*, of a triangular form, but appearing almost round, with a sandy shore behind it: the passage between will admit boats only, but you may sail as near without it as you please.

GENERAL REMARK.—We shall add only, with respect to Elba, as a well-attested fact, that *the compasses of vessels approaching the coast are frequently deranged*, owing to the quantity of iron and ferruginous matter in different parts of the island, within the limits of the attraction of which they may happen to fall. This attraction, it is said, has been more especially noticed on the south and east.

PIANOSA, or PLANOSA.—The north end of the isle bearing this name lies at the distance of 9½ miles *true* South from the S.W. point of Elba. Pianosa is a very low irregular island, covered with shrubs, and is about 3 miles in breadth. The North and N.W. sides are represented as generally bold; but, from the S.W. point, a reef of rocks stretches off to a considerable distance. Galleys may anchor on the eastern or western sides of the island with an off-shore wind: at the distance of three-quarters of a mile are from 10 to 12 fathoms of water. This isle has very few inhabitants. Its N.W. side forms a sandy bay, having good ground in from 16 to 7 fathoms. Off the north end is an islet, *Marchese*, and off the S.W. end another, called the *Turk's Rock*. The S.E. coast is generally rocky and foul; but the South coast clear, with sand and weeds. Here, from a fountain on the beach, water may be obtained.

MONTE CHRISTO.—The isle bearing this name is very high, though only two miles in extent from North to South. At a distance it appears round. Its situation is in lat. 42° 19½′, long. 10° 20′ E., at 14 miles S. by E. ½ E. [*S.E. by S.*] from the S.E. end of Pianosa, and 8½ leagues S. ½ E. [*S.S.E.*] from the S.W. point of Elba. On its western side is a large rock above water, and another on the eastern side. Off the S.E. shore a vessel may anchor, in case of necessity; as likewise in a cove, the *Cala Maestro*, on the N.W.

The AFRICA ROCK.—At 11 miles S. ½ W. [*S. by E.*] from the S.W. end of Pianosa, and 8 miles W.N.W. [*W. ½ N.*] from the N.W. end of Monte Christo, is an islet, now called the *Africa Rock*, having about it several smaller rocks, above and under water; and, at 2½ miles N.E. by N. [*N. by E. ½ E.*] from the Africa Rock is the *Africa Reef*, a small

small shoal of 2½ fathoms, lying with the N.E. point of Monte Christo S.E. ½ E. [*E.S.E.*] 3 leagues distant. These are very dangerous, especially by night, and great caution is required, during a calm, lest the current should carry you on them. The distance between the reef and the coast of Corsica is 8½ leagues; and, if sailing here by night, you should also be careful how you approach the latter; for, although the interior land is high, the coast is low, so that you may be deceived, and think yourself farther off than you really are. Equal caution is required for avoiding the Africans and the Isle Pianosa: the latter, as already noticed, being very low.

The Africa Rock will be avoided on the south, by keeping the summit of Monte Christo E.S.E. [*E. ½ S.*] or more to the eastward. You may safely pass, with a leading wind, between the islet and Africa Reef, with the summit of Monte Christo S.E. ½ E. [*E.S.E.*]

From the summit of Monte Christo, Cape Calamata, the S.E. end of Elba, bears N.N.E. ½ E. [*N. by E.*] 23½ miles; *Cape Troja* or *Troya* N.E. ½ E. [*N.E. by N.*] 34 miles; the summit of the *Isle Giglio* E.S.E. ½ E. [*East*] 28 miles; that of *Gianuti* S.E. by E. ½ E. [*E. by S.*] 36 miles; and the port of *Civita Vecchia*, in the Roman territory, S.E. by E. ½ E. [*E.S.E. ½ E.*] 65 miles.

COAST OF TUSCANY, &c. CONTINUED.

GEODETIC POSITIONS.	Latitude.				Longitude E.		
Cape Troya	42°	48′	0″	..	10°	45′	37″
Castiglione	42	45	0	..	10	55	7
Talamone	42	32	20	..	11	10	15
Formiche of Talamone	42	37	0	..	10	53	8
San Stefano	42	25	40	..	11	9	48
Cape Argentaro; Islet	42	23	30	..	11	7	8
Isola Giglio; Town	42	21	30	..	10	55	52
Isola Gianuti; North point	42	14	0	..	11	9	10
Civita Vecchia	42	4	40	..	11	45	0
Palo	41	54	30	..	12	5	20
Mouth of the Tiber; Lighthouse	41	45	30	..	12	11	30
Rome; College Observatory	41	53	52	..	12	28	40
Ardea; Town	41	37	40	..	12	31	45
Cape d'Anzo; Lighthouse	41	27	0	..	12	42	0
Monte Circello; S.W. point	41	12	25	..	13	2	45
Terracina	41	15	40	..	13	15	0
Isola Palmarola; North point	40	57	0	..	12	52	10
Ponza; South point	40	52	30	..	12	57	30
La Botta Islet	40	50	10	..	13	6	10
Vandolena; S.W. point	40	46	40	..	13	24	15

Cape Troja, which bears from Piombino as shown in page 100, has a square tower standing on it, another a little way within it, and a village at the bottom, or landing place.

On a steep rock, at 4½ miles S.E. ½ E. [*E.S.E.*] from the Rock Troja, is the square white tower of *Rochetta*; at a mile beyond this is a rivulet, and at 4 miles the town of *Castiglione della Pescaja*, or *Castilloné*, with some fortifications. The coast between curves a little, and has a sandy shore. The *Marina*, or Port of Castiglione, distinguishes the entrance of the lake of that name, which is famous for its production of salt.

From the Marina of Castiglione the points of the *River Ombrone* bear S.S.E. [*S.E. ½ S.*] 9 miles: the shore between, which is very low and sandy, forms a semi-circular bay, upon which stand the towers of *Marsa*, *S. Rocco*, and *Fort Trappola*. Inland are Mount Moscone and the town of Grosseto.

From the mouth of the Ombrone the coast trends easterly to the distance of 3 miles; it thence becomes elevated and takes a sudden turn to the south. The village of *Talamone*, which stands on a steep point of rocks of the same name, is 2½ leagues S.S.E. ½ E. [*S.E.*] from the mouth of the Ombrone, and is fortified. At the distance of a league and a half to the northward of Talamone is a small cove, the *Cala Forno*; at 2½ miles is the *Torre Canelle*, and in the vicinity are three rivulets.

In a cove to the eastward of Talamone, and, in case of necessity, vessels may anchor. On an eminence to the eastward of Talamone stands the inland town of *Magliano* or *Maliano*,

Maliano, which may be seen from the sea. The cove is open to S.W. winds, but the ground is good. In entering, you may round the citadel within half a mile, there being a depth of 7 fathoms near the point, and the same depth in the middle of the bay, shoaling thence to 4 and 3 fathoms, mud. Here you may obtain oxen, sheep, and goats, but fresh water is brought from wells in the country.

The FORMICHE.—The islets called the FORMICHE are three flat rocks, lying at the distance of 7 miles W. by N. [*W. ½ S.*] nearly, from the mouth of the Ombrone, and 12 miles S. by E. [*S.S.E. ¼ E.*] from Cape Troja. They range in a line S. by E. ½ E. and N. by W. ½ W. in an extent of a league and a half, but are separated by large intervals of deep water. The tower of Cape Troja bearing N.N.W. [*N.W. ½ N.*] leads clear within them toward the promontory of Argentaro.

From the Formiche to the north side of MOUNT ARGENTARO, the bearing and distance are S.S.E. ½ E. [*S.E.*] 5 leagues. The land between Talamone and the Mount forms a bay, with a very low sandy shore, near the middle of which is the *Albegna*, a small river, and some salt-ponds. *Fort St. Stefano* stands on a point of rocks, at the north end of Mount Argentaro; and at about two miles to the eastward of this, on the low sandy shore, are two watch-towers, situated on different points; of these towers the westernmost is square, and the other round: near the latter is the entrance of the *Lake of Orbitello*, which may be known by its point being low, covered with trees, and sandy at the extremity. The lake is 5 miles long, and is distinguished by the town of ORBITELLO, which stands on the end of a low point upon the eastern side, and stretches toward the middle of the lake. Boats only can enter and go to it.

MOUNT ARGENTARO is a high and extensive promontory, in front of the Lake of Orbitello, which trends in a N.W. and S.E. direction two leagues. It may be seen more than 10 leagues off, and, when it appears in the above directions, it shows like an island.

At about a league to the south-westward of Point St. Stefano is an islet, between which and the main is a narrow passage for small vessels. To the S.S.E. from this islet the coast is very high and steep: it has several watch-towers on the points, and one on the top of the mountain, with a small house near it. Another islet, *Rosso*, lies at 3½ miles to the southward of the former, and at half a league to the N.N.W. of the southern extremity of the mount.

PORT HERCOLO or ERCOLE'.—At nearly 3 miles to the E.N.E. from the south point of Argentaro, and near the coast, lies the islet *Archetto*, within which, to the N.E., is the small bay, now known as *Port Ercolé*, defended by a fort, *Stella*, on its western point. This place is open to all winds from the southward. Its little port is on the western side, and shut in between two high points. The port is about a mile to the northward of the islet, and shut in between two high points, upon the westernmost of which stands the fort, and at its foot a small fortified town. On the eastern point, which is lower than the other, is *Fort Philip*, considerable both from its situation and the strength of its buildings. The entrance of Port Hercolo is not more than a cable's length across, and about a cable and a quarter deep; it was formerly a good harbour, but is now so much choked up with mud and sand, as to be capable of containing five or six galleys only, and they must lie alongside the town, with their heads to the sea, moored with four cables, in about 4 fathoms, on mud and weeds. In the entrance are 8 fathoms. In the bottom of the port are some houses, and a fountain, where you may obtain water. The S.E. wind blows full in, and throws in a great sea, from which there is no shelter.

At about 3 miles to the eastward of Port Hercolo is *Cape Anfedonia*, which has two watch-towers on it, half a mile from each other. Opposite to this point, at half a league distant, is a flat islet, called the *Formica of Anfedonia*, between which and the land is a good and deep channel of 10 to 15 fathoms.

GIGLIO and GIANUTI. [Ant. *Igilium* and *Dianium*.]—To the westward and southward of Monte Argentaro are the islands *Giglio* and *Gianuti*. The first is four miles in length from north to south, and nearly two in breadth. It is elevated and well inhabited by people engaged in fishing and agriculture. The north side forms an open cove, *Porto Campese*; but its port and town are on the eastern side. The island is noted for its quarries of beautiful marble.

Captain Smyth places the south point in latitude 42° 17′ 15″, and longitude 10° 59′ E., and hence the south point of Monte Argentaro bears East, [*E.N.E. ¼ E.*] 9½ miles; the

the port of *Civita Vecchia* S.E. ½ E. [*E.S.E.* ½ *E.*] 36½ miles; and the S.W. point of the isle Gianuti S.E. ½ S. [*S.E. by E.*] 8½ miles.

GIANUTI.—This isle, of moderate height, is little more than a mile in breadth, but its south-eastern shore forms a small harbour, useful during northerly and westerly winds. From the S.E. point of the isle, *Civita Vecchia* bears S.E. by E. [*E.S.E.* ½ *E.*] 27½ miles.

THE ROMAN OR PAPAL TERRITORY.

From the S.E. point of Cape Argentaro to the mole of the town of CIVITA VECCHIA, the bearing and distance are S.E. ½ S. [*S.E. by E.*] 28½ miles. The coast between forms a bay, the shore of which is low, but the country elevated. At about half-way between is the *River Fiora*, near to which, on the East, about two miles up the country, stands the elevated town of MONTALTO, having several large trees about it. At 7 miles to the northward of Civita Vecchia is *Porto Clementino*, at the mouth of the *River Marta*; 3 miles within which, on a rising ground, is the town of CORNETO, appearing white, with several steeples and towers in it, which distinguish it from other places.

To the southward of Port Clementino are extensive salines. Two miles more to the south there stands on the shore the *Convent Agostino*, and beyond this the *Tower of Aliga*; the latter being 4 miles to the north from Civita Vecchia.

CIVITA VECCHIA.—In latitude 42° 4′ 40″ and longitude 11° 45′ E. stands *Civita Vecchia*, the principal sea-port on this side of the Roman territory, which may easily be found, on coming from the westward, by mean of the town of Corneto, standing to the northward, as already described, and by Cape Linaro, which lies at 5 miles to the southward. As the last stretches more into the sea than any other point hereabout, it may be readily known. It is high, has a square tower on it, and slopes down to seaward. As you approach you will discover the tower of the lighthouse on the extremity of the New mole and the town of Civita Vecchia at the same time. The tower exhibits a fixed light at 82 feet above the sea, which may be seen at the distance of 2½ leagues.

The town is well fortified with good walls and ditches, several half-moon batteries, and other works; and toward the sea stands a very fine castle upon a peninsula, from which the mole stretches out to a considerable distance. Opposite to the town is the *new mole*, about 180 fathoms long, built upon some rocks that are level with the water; at its end are two small hooks, pointing toward the land; on the N.W. end are some ruins, and on the other end stands the lighthouse. Over against the two ends of this mole are two considerable forts, or towers, to defend the entrances; they are about 80 fathoms from the points of the mole; but these towers enclose a large space, which is the Port of Civita Vecchia, where ships and galleys may anchor. You may run in at either of the entrances, according to the wind, observing to pass nearly in mid-channel, or rather nearer the new mole, close to which there are 12 feet of water: in the north entrance there are 17 feet, and in the south entrance upward of 20 feet; but you must not go near the castle, on account of some rocks that stretch off from it under water.

In the bottom of the port is the basin, which is shut up with a chain. Ships anchor indifferently, either in the new mole or in the middle of the port, in 16 or 18 feet of water, sheltered from all winds; but strong gales from S.W. cause the sea to break over the new mole, and are otherwise very troublesome to the shipping in the mole. Good water may be had at the entrance of the town. If, at night, you cannot get into the port, you may anchor to the N.W. of the mole-head, at 3 or 4 cables' distance, in from 12 to 9 fathoms of water.

Two miles to the northward of the port of Civita Vecchia, is a point stretching out a little way into the sea, with a tower upon it; between are some rocks under water along the coast; and, about half-way between the lighthouse and Cape Linaro, is the *Torre Marangone*, standing on the coast, opposite to which there are several reefs stretching off nearly a mile under water, of which you must be aware.

CAPE LINARO.—Cape Linaro should be approached with caution, as a reef extends from it to the S.W. three-quarters of a mile. When off the Cape you will see the *Tolfa Peak*, on the high land of the interior, at 3 leagues to the north-eastward. Here, also, you may see the church and village of *Marinella*, which stand on the coast, at 3½ miles eastward from the cape.

From Cape Linaro to the Fiumicino or N.W. Mouth of the Tiber the bearing and distance are S.S.E. ¾ E. [*S.E.* ¼ *E.*] 7½ leagues. The land between forms a slender bay, with a sandy shore, having several villages, towers, &c., with numerous rivulets falling into the sea.

St. Severa, a small village by the sea-side, stands at the distance of 7 miles S.E. by E. ¼ E. from Cape Linaro. At a mile from the village, to the southward, is the tower of St. Severa. To the northward and north-eastward of this portion of coast the land gradually rises to the summit of a chain of mountains, which gradually decline to the south-eastward.

At 7 miles to the south-eastward of Severa is the village of *Palo*, which may be known by its having a large white magazine on the sea-side, and a village, *Ceveteri*, on an inland hill to the E.N.E. The *Torre Flavia* stands at two miles north-westward from Palo, on a point bordered with rocks. The *Torre Perla* at 2½ miles south-eastward from the same, and the *Torre Maccarese* at two miles South from that of Perla, and two leagues North from that of the Tiber.

RIVER TIBER.—The River Tiber, which flows through the city of Rome, has two outlets to the sea, which are divided by the *Isola Sacra*, a tract of wooded land about half a league in breadth. Of these, the first, or northernmost, is called the *Bocca del Fiumicino* (pron. *Fiumechino*), and the second, *Bocca di Fiumara*. All the land near the sea, about the mouths of the Tiber, is low and marshy; it is not, therefore, readily made out. In moderately clear weather the dome of St. Peter's at Rome, may be seen at a great distance off at sea; and, when it can be seen, this is the best mark for ascertaining your situation: for, when the dome bears E.N.E. ¼ E. [*N.E.* ¾ *E.*], it will be in a line with the N.W. mouth of the river.

This is the only mouth that vessels of any burthen can enter by, there being between 6 and 7 feet of water on the bar, and from 2 to 3 and 4 fathoms inside. It may be known by the tower of *Fiumicino*, which is *square*, with a lantern upon its top, and some houses and smaller towers near it. The south of Fiumara entrance may be known by an *octagonal* tower, with a small look-out house and flag-staff upon the top of it, which stand near it. Nothing larger than a boat can enter by this mouth, there being no more than two feet of water on the bar, with 4 and 5 feet inside.

LIGHTHOUSES.—By a notice dated Rome, 12th of October, 1825, it was announced that a *new light* had been established on the *Clementine tower* at the mouth of the Tiber, in order to point out the mouth of the channel of Fiumicino; and another on the *Tower of Anzo*, on the same coast, which is 28 miles more to the southward. The notice states that the light is successively shown and concealed for equal intervals. The reflectors enlighten the sector comprised between Cape Linaro and Cape Anzo. The successive occultation and bright light of Fiumicino may be distinguished by the naked eye from Palo, that is to say, at the distance of about 11 nautic miles.

There is good anchorage, with off-shore winds, and, in the summer season, from 3 to 6 miles W.N.W. or N.W. by W. from the tower of Fiumicino, in from 6½ to 13 fathoms of water, stiff mud, and good holding-ground.

Water may be obtained from the river, but boats ought to go well up before they fill it, otherwise it will be brackish.

In case of necessity, beef and other refreshments may be had by application to the British Consul at Rome; although dearer than usual, from the distance, which is 14 or 15 miles.

From the Fiumara Mouth to Cape d'Anzo, the bearing and distance are S.E. by S. [*S.E.* ¼ *E.*] 28 miles. The land between forms a slender hollow, is very low near the sea, and has several houses and towers upon it. From the *Torre St. Michele*, on the eastern side of the Fiumara entrance, these towers stand at the following distances:—

Torre di Paterno, 10 miles; Torre Vaianica, 12; Torre St. Lorenzo, 20; Torre di S. Anastasio, 24; Torre di Caldano, 25; and Torre d'Anzo, 28.

From Cape d'Anzo north-westward, to Palo, the coast of the *Campagna di Roma*, or Plain of Rome, is frequently so obscured by haze and fog, that the objects on shore are not distinguishable: still less is the land, upon which there are several marshes and lakes. It is also to be noticed that the current here generally sets toward the shore, and for this a proper allowance must be made.

CAPE D'ANZO is a projecting point, whence the land trends to the east. Its position is,

is, lat. 41° 27′, long. 12° 42′ E. The light-tower on its extremity is large and square, and some rocks are near it. The tower of Caldano, which is round, may be seen when you are to the south-eastward of Cape d'Anzo.

Near Cape d'Anzo, to the eastward of it, is a mole in form of a hook, constructed upon a sandy shore, out of the ruins of a fort built by the emperor Nero.

This mole is called PORT NETTUNO, or NEPTUNE; it stretches about 200 fathoms into the sea to the southward, and at its end a hook stretches about 90 fathoms to the eastward, which shelters the vessels within it from the wind and sea: on the extreme end of the mole is a small square fort, with a tower in the middle of it. In the angle of the mole is another small fort like the former, near which are several magazines for the use of the harbour, and adjacent to them is a chapel. Between Cape d'Anzo and this mole was formerly the old port, but the ruins of a fort are scattered about in several places, some of which appear above water, and the port is entirely choked up with sand. To sail into the port, from the westward, give the above-mentioned ruins a good berth, because many fragments of them lie under water, and afterward sail along by the point of the mole where the light-house stands: when in, you may anchor at discretion with your starboard anchor, and moor with a sternfast to the east part of the mole; by this mean you will lie with your stern to the mole to seaward, and your head toward the shore. Being moored close to the mole-head, you will have 16 feet of water; within, the water is deeper, and the ground is mud and sand: here is room for eighteen or twenty galleys, and you are safe from the winds and the sea: the E.N.E. winds are the most troublesome, but, as they blow over the land, they cause no sea. From the head of the mole, about 100 fathoms toward the shore, there are from 15 to 20 feet of water, so that there is nothing to prevent you from mooring on that side; but you must not go farther in than the magazines, which stand on the great mole. Near the middle of this mole is a fountain with several pipes, where excellent water may be had without going out of your boats; there is also a handsome fountain near the beginning of the mole, beyond which is a large house, serving as a mark to know the port by, when you are at sea.

The town of NETTUNO, (or NEPTUNE,) is nearly two miles East from the mole; it is small, but antient, and stands by the sea-side, on a sandy shore; at about one-third of the way is a magnificent palace, and all about, from Cape d'Anzo to the town, are several vaults, grottos, baths, and pillars, hewn out of the rocks, with other monuments of antient magnificence.

The Lighthouse of Cape Anzo is noticed on the preceding page.

MOUNT CIRCELLO, or CIRCEO, is 7 leagues S.S.E. ¾ E. [*S.E.* ½ *E.*] from Cape d'Anzo; the land between forms a bay, with a low marshy coast. At 4 miles S.S.E. ½ E. [*S.E.*] from Nettuno stands the tower of *Astura*, upon a point which stretches a little way into the sea, having a small river near it to the eastward. *Mount Circello* is a high mountain, 2½ miles long, and projecting a great way into the sea; it may be seen from a great distance, whence it resembles an island, because the land is low to the northward of it; it is very steep to the southward, and near it are two watch-towers. About one mile to the eastward of the southern point, is a square tower, *Torre del Fico*, upon a low sandy point, and a village about it, called *St. Felice;* between this tower and the point of Circello, where stands another tower, *Torre Cerva*, you may anchor in 6 or 7 fathoms of water, on sandy ground; but you may not approach near the square tower, because a point of rocks stretches off from it, under water, two cables' length or more; neither may you suffer yourself to be surprised by the sea-winds, from which you here have no shelter. You may also anchor, in case of necessity, on the N.W. side of the mount.

TERRACINA.—At the distance of 3 leagues, to the eastward, from Monte Circello, is *Terracina*, the last town on this coast within the limits of the Popedom. The coast between is very low, with a sandy shore, but the town stands on a moderate height: near it, to the eastward, is a considerable lake, communicating with the sea, by two outlets, which are divided by a salt marsh, one league in length. Around Terracina the country is fruitful, but marshy and unwholesome. The harbour, once famous, is now choked up; and the town, though fortified, is inconsiderable.

At 2½ miles westward from Terracina, and six miles eastward from the S.E. extremity of Mount Circello, is the *Badino tower*, with revolving light, at the entrance of a canal cut through the Pontine marshes; it is 65 feet high above the sea, and seen at two leagues off. Exclusive of the tower, two lanterns mark the entrance.

THE

The Islands Ponza, Palmarola, Zannone', Vandotena, *&c.*

PONZA.—Of this groupe of Islands Ponza is the chief, and its north end lies 5½ leagues S.S.W. ½ W. [*S. by W.*] from Cape Circello. It is long and narrow, being four miles in length, by half a one in breadth, curved in shape, with its convex side or bank to the west. It contains a village and considerable salt-works. The land is irregular and very high, especially toward the south end; it may be seen at a great distance, and appears from the westward like several islands. At a short distance from the N.E. end of Ponza is a small but high islet, called *La Gabia*, with a passage for boats only between.

The western side of Ponza is rocky, and the rocks extend to a mile from the central shore.

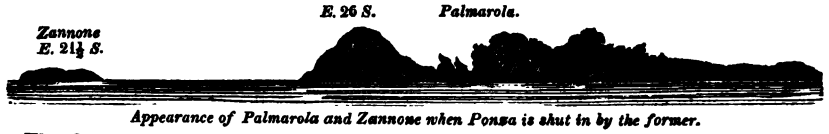
Ponza Road is on the S.E. side of the island, at a mile N.E. from the South point. Here galleys and other small vessels may anchor. This road is defended by a small fort, off the S.E. point of which is a large rock above water, with a depth of 15 fathoms between; there is also another rock above water, close to the shore, which is higher than the former, and has several small ones about it. Beyond the fort is a mole, and a small cove with very little water.

Le Formiche, a cluster of rocks above water, lies at the distance of half a mile from shore, at three-quarters of a mile to the E.N.E. from Point della Guardia, the south point of Ponza. The water is deep in the intermediate channel, but the safest way is to haul round the rocks to the eastward.

ZANNONE'.—The Island Zannoné lies at the entrance of 2½ miles E.N.E. [*N.E. ½ E.*] from La Gabia. It is a mile in length from East to West, and half a mile broad, very high, and not inhabited. At a quarter of a mile from its S.W. side is a reef of sunken rocks, and between it and Gabia are several high rocks, of which the nearest is half a league from the S.W. side of Zannoné. This rock is called *Scoglio Grande*, or *Great Rock*; between are from 10 to 20 fathoms of water.

At half a mile to the south-westward of the Scoglio Grande is the rock called *Chiana de Mezzo*; and, in the same direction from the latter, is another called *Le Scoglietelle*, which is at one-quarter of a mile from Gabia, and has some smaller rocks at its western end. You may safely pass between Zannoné and the Great Rock, but the usual passage to the road of Ponza is between Gabia and the rock nearest to it; this being three cables' length wide, and 10 to 15 fathoms deep; and you may pass close to the land or the rocks.

PALMAROLA.—The Isola Palmarola lies about four miles to the westward of Ponza. It is a mile and three-quarters in length, from north to south, and uninhabited. It has rocks above water both at the north and south ends, of which one, off the south end, is half a mile from shore. There is also a sunken reef, extending a mile S. by W. ½ W. [*S.W.*] from the same end of the island.



Appearance of Palmarola and Zannone when Ponza is shut in by the former.

The Scoglio, or Rock, called La Botte, lies at the distance of 7 miles S.E. ¾ E. [*E.S.E. ¼ E.*] from the south end of Ponza. It is a large rock, over which the sea breaks in tempestuous weather, but close to which there is from 58 to 60 fathoms of water.

VANDOTENA.—The Isola di Vandotena, which lies nearly 7 leagues S.E. by E. [*E.S.E. ½ E.*] from the south of Ponza, and 29 miles S.S.E. ½ E. [*S.E. by S.*] from Cape Circello, is about two miles in length, and one in breadth. It has a reef on the north side, at some distance from shore, and a village with a fort stands on its eastern side. At three-quarters of a mile from this end is an islet, named *St. Stefano*. All round the water is deep, at a short distance.

Appearance of Vandotena and St. Stefano, the former bearing N. ¼ E.

THE

THE NEAPOLITAN COAST, from GAETA to Cape SPARTIVENTO.

GEODETIC POSITIONS.	Lat. N.			Long. E.		
GAETA	41°	13′	0″	13°	34′	0″
Ischia; the summit	40	43	30	13	52	50
Procida; N.W. end	40	46	10	13	59	40
Cape Miseno	40	46	15	14	5	0
Baia or Baoa	40	48	45	14	4	10
Pozzuoli; Road	40	49	0	14	6	20
Isola di Nisita; centre	40	47	45	14	9	32
NAPLES [*Napoli*]; Lighthouse	40	50	12	14	15	45
Vesuvius; the summit	40	48	40	14	26	45
Cape Bruno	40	45	0	14	24	45
Castel'amare	40	41	10	14	29	30
Cape Sorrento	40	37	10	14	21	0
Punta Campanella	40	33	0	14	19	15
Isola di Capri; summit	40	32	0	14	13	25
Li Galli; Isola Longa	40	33	50	14	26	10
Amalfi	40	38	0	14	36	30
Salerno	40	40	0	14	45	15
Point della Licosa	40	14	0	14	53	30
Point Palinuro	39	59	50	15	14	15
Policastro	40	2	0	15	32	30
Cape Setraro	39	30	0	15	54	30
Monte Cocuzzo; summit	39	16	0	16	6	0
Cape Suvera	39	2	40	16	8	30
Cape Vaticano	38	36	30	15	51	0
Gioja	38	25	0	15	55	0
Scylla; castle	38	15	0	15	44	30
Reggio	38	5	30	15	39	30
Cape dell Armi; tower	37	57	15	15	41	30
Cape Spartivento	37	55	45	16	3	15

GAETA stands on the point which divides the Bays of Terracina and Gaeta, at the distance of 8 leagues E.S.E. ½ E. [*East*] from Cape Circello. On the coast between, besides *Terracina*, already described, are several villages, &c. Between Terracina and Gaeta the land is high, and there are watch-towers on its projecting points.

The promontory, on which Gaeta is situated, is connected to the main by a low and narrow isthmus, to the eastward of which is the anchorage. The fortifications about the town are considerable. The sea about it abounds in fish, especially sturgeon, of the roes of which *caviar* is made, so highly esteemed by the Italians. Gaeta is a mile in extent, exclusive of a suburb to the north-west; most of its streets are very narrow, and the houses built on porticoes. The neighbourhood around is very pleasant, and its soil exceedingly fertile. The citadel, built on an eminence, commands the city.

GAETA may readily be known, on approaching from the westward, by *Monte la Trinitá*, on the W.N.W., to the westward of which is a sandy cove, *Cala di Serpa*. This mountain is steep, and cleft from the top to the bottom, about a fathom in width: at its foot, to seaward, is an oratory, and near the cleft is a convent of friars. As Gaeta is built on a very steep point toward the sea, which forms the larboard entrance of the bay, the town and several fortifications show to leeward, and a conspicuous object is the *Torro d'Orlando*, on the summit of the high land, westward of the town.

The anchorage to the northward and N.W. of the town, with from 10 to 12 fathoms, is spacious. The place for galleys is near the town, but you must not go farther in than halfway of the walls, for, beyond, the ground is shoal and rocky. In the middle of the bay the water is deep, and the situation open. The most troublesome winds here are those from the N.E. to the East.

At 2½ miles to the northward of Gaeta Point, on the sea-side, stands a considerable village, *Castellone*; adjoining to which, on the east, is another, *Mola*. On the west of the first is a small rivulet, where good water may be obtained.

From

From Gaeta to Cape Mesa on the N.W. side of the Gulf or Bay of Naples, the bearing and distance are S.S.E. [*S.E. ½ S.*], 10½ leagues. The land between has a bay-like form, and, as far as three leagues from Gaeta, eastward, to the *River Galigniano*, it is high. The shore thence south-eastward, two leagues in extent, is low, until it reaches the high lands in the vicinity of *Monte Massico*, at the foot of which, to the South and S.W., are the village and tower of *Mondragone*. At 5½ miles to the southward of the latter, and 18½ miles S.E. ½ S. [*S.E. by E.*] from Gaeta, is the mouth of the *River Volturno*, nearly a mile to the southward of which, on the low sandy shore, is the tower of Volturno: from this tower a shoal and reef extend three-quarters of a mile to the north-westward.

At a mile to the northward of the tower, on the south bank of the river, and at three-quarters of a mile within the entrance, stands *Castel Volturno;* and, at 7 miles to the southward of it, there is another tower, called *Torre di Patria*. At a mile to the southward of the last is the mouth of the small River Patria, which communicates with the Lake or *Lago di Patria*. The distance hence to Cape Mesa is exactly two leagues: the land variegated and increasing in height. Cape Mesa is a very high point; and upon a rising part of it, to the southward, is a round watch-tower, off which is a small islet, the *Scoglio S. Martino*.

The GULF or BAY of NAPLES.—The GOLFO DI NAPOLI, or more properly, the BAY OF NAPLES, is distinguished, at its entrance, by the Islands ISCHIA and PROCIDA to the N.W., and by the Island CAPRI and the promontory of CAMPANELLA to the S.E. The breadth of this entrance is 5 leagues.

The Bay of Naples is considered, altogether, as the most beautiful and interesting bay on the face of the globe. Its curiosities, both of nature and art, its remains of classical antiquity, its varied and wonderful scenery, its volcanic eruptions, earthquakes, cities founded, established in all the pride of luxury, and overwhelmed; mountains converted into lakes, and lakes into mountains, form a combination of circumstances and events, which is no where else, on an equal space, to be found; and its shores have, therefore, exercised the descriptive pens of many writers.*

On the N.W. side, between Cape Miseno and Pozzuoli, is a steril and mountainous coast. Cape Miseno is a block of tufa, or lime-stone, of considerable height, and was evidently a volcano, the crater of which may still be traced on the south, though nearly worn away by the action of the sea. In the interior of the mountain are vast caverns and subterraneous streets, supposed to have been magazines for the Roman fleets, which rendezvoused in a port sheltered by the cape, the piers of which are still seen level with the water. The remains of the town of Misenum, situate on the cape, consist of a theatre and the ruins of some monuments. On the north of the cape are the *Porto di Miseno* and Mare Morto, abounding with eels and barbels.

The ruins of some grand buildings on the shore and under water, at 2½ miles to the northward of Cape Miseno, exhibit the site of the voluptuous *Baia;* opposite to which, on the east, is *Pozzuoli*. Within half a mile eastward from Pozzuoli is the *Solfatara*, or Sulphur Hill. The vapours which exhale from the various craters, from the Solfatara, from the lakes and hot springs, and from the marshes formed by the waters, which antiently flowed in superb aqueducts, infect the atmosphere of these shores; and hence, between Cape Miseno and Pozzuoli there is scarcely a habitation. The more healthy situation of the latter, on a point of land advancing into the sea, has retained some inhabitants; beyond it, to the eastward, the scene improves, and the isle Nisita is seen covered with verdure.

In rounding the north shore toward Naples, a new scene opens to the eye, the shore being thickly dotted with noble buildings, in the midst of beautiful plantations. The city of Naples presents itself, rising amphitheatrically on the side of a mountain, and beyond it a vast plain, richly cultivated, and watered by the winding rivulet *Sabeto*. On the eastern side of the bay, *Vesuvius*, with its double summit, rises, in majestic solitude, from the surrounding plain, and two-thirds of its height are cultivated, the summit only being bare of vegetation: on its sides and at its foot are scattered villages and villas, built on the lavas of successive eruptions, which time has converted into the most fertile of soils.

The S.E. and south shores of the Bay of Naples, rise perpendicularly in volcanic cliffs to a great height, immediately behind which are high mountains, clothed with verdure to

* See our larger Directory, Vol. I., pages 121, 2, 3.

their

their summits, and their sides decorated with villages. On this side is *Castell'a Mare*, with its little haven, formed by a mole, where vessels of war are built, and two leagues farther, to the S.W., is *Sorrento*, the antient *Surrentum*, one of the handsomest towns of the kingdom. Between are *Vico* and two other villages.

We shall now take the coast in detail, beginning with the island Ischia.

The ISOLA D'ISCHIA is 5¼ miles long, from East to West, and three broad. It consists of one large and several lesser hills, all formed by volcanic eruptions, and it abounds with metallic substances, has many hot springs, and is fertile, producing grapes, figs, oranges, pomegranates, chestnuts, aloes, &c. On its eastern side is the town, well fortified, and having a good road, defended by a citadel on an insulated rock, connected to the town by a stone bridge, 200 fathoms in length. There are also several villages on the island, particularly *Foria*, on the western side; *Lacco* and *Casamicciola* on the north; *Panza* on the S.W.

Monte Epomeo, the mountain in the middle of the island, is very high. It was formerly a volcano, from which there was a dreadful eruption in 1301. This mountain is formed like a sugar-loaf, with white spots in some parts of it. Near the shore of Ischia, in different parts, are many scattered rocks.

On the western point there is a tower, and within it, on the N.E., is the village of *Foria*, above-mentioned, which stands on a sandy bay, wherein galleys may anchor, sheltered from winds, between S.S.W. to East and N.E.; but North, N.W., and West, winds blow full in, and are dangerous. The western sea is, however, broken off, in some degree, by *Le Porchette*, a bank, one-third of a mile long, lying off the bay at three-quarters of a mile from the shore, and to the northward or southward of which vessels must pass for taking the road.

The town of ISCHIA, already noticed, lies on the N.E. side of the island, and the castle or citadel is to the eastward of it. This castle is high, steep, and fortified on all sides. Galleys may anchor on either side of the bridge, and carry fasts on shore toward the town, between which and the castle, on the north side, there are 3 or 4 fathoms of water, on oazy ground. Southward of the bridge are some rocks lying under water, near the castle, and others on the opposite side, off a point of the island. Those who would anchor near the bridge must pass between them. At half a league to the southward of the castle is a high point, *Capo d'Arco*, near which are some shoals which must be carefully avoided.

PROCIDA and VIVARA.—These isles lie between Ischia and Cape Miseno. PROCIDA is of very irregular shape, and its greatest breadth is 2¼ miles. The town occupies a considerable portion of the island, and the rest is covered with vines, fig and orange trees. The coasts are indented with semi-circular coves, of which the principal is toward the S.E., where it forms a snug little harbour, which is defended by a castle. There are several fine palaces and country-seats on the island. The town is well fortified, and strong from situation: its point, to the N.E. and East, is very high, and steep to seaward.

At the foot of the castle of Procida is a reef above water, at full two cables' length from shore, with 3 fathoms of water close to it. Generally it is elevated some feet above the sea, but the waves break over it in rough weather. At other times the fishermen dry their nets on it. You may anchor under the town, to the north-eastward of it, in 4 and 5 fathoms; but not too near the beach, as there the water is shoal. N.E. winds blow full in here.

The S.W. end of Procida is a mile and a half from the Castle of Ischia, and between, but near to Procida, lies the little island VIVARA, which is nearly a mile in length. There is a good passage between the castle of Ischia and this island, above a mile in width, with a depth of 12 to 15 fathoms; but it is necessary to keep nearest to the castle, where you will have 7 or 8 fathoms of water, and thus you will avoid a ledge of sunken rocks, which lie at about 600 fathoms to the westward of the N.W. end of Vivara, and near to which the depth is only 3 fathoms.

Between Vivara and Procida is a good harbour, open only to the South and S.E. winds, and in the middle of which there is good anchorage for small vessels, in 4 and 5 fathoms of water, bottom of sand and weeds.

From the N.W. end of Vivara to that of Procida, the distance, toward the N.N.E., is half a league. The coast between forms a slender bay, divided in the middle by a reef, which extends from shore to the westward nearly a quarter of a mile. A similar reef extends from *Punta di Pozzovecchio*, the N.W. point.

From

From the N.W. point to the north point, called *Punta Chiuppeto*, the distance, eastward, is rather more than half a mile. About the latter are several rocks above water.

CAPE MISENO, &c.—Cape Mesa, which has been already noticed, lies at the distance of a mile and three-quarters N. by E. ¾ E. [*N. ¼ E.*] from Chiuppeto Point. To the northward of the watch-tower, which stands upon this cape, is the *Scoglio S. Martino*, or Islet of St. Martin, which is moderately high, and has a square tower on it. There is no passage between this islet and the main, and there are sunken rocks to half a cable's length around it.

From Cape Mesa to Cape Miseno the distance to the south-eastward is 3½ miles. In the first half of this distance the land is high, but thence it forms a bay with a low sandy shore, where there is anchorage in 5 and 4 fathoms of water, bottom of sand and weeds, and sheltered from N.W. to N.E.

It is to be noticed that, at about half a mile to the southward of Cape Mesa is a dangerous reef, called *Tavola del Rey*. Near it is a depth of 12 feet. You will clear it by passing the coast at not less than half a mile, or by keeping the east end of Procida S. ¼ E. [*S.S.E.*] until you are in mid-channel.

Cape Miseno is a very high long point, which has two square watch-towers upon it, near each other, and a large house; near its end is a rock above water, close to which is a depth of 13 fathoms.

To the north of the promontory of Miseno is an inlet, *Porto di Misena*, formerly a good harbour, within which is the lake *Mare Morto*. In the harbour, galleys still may anchor. On the north side of it, extending to the E.S.E., is a long low point of even rocks, resembling a work of art; these are above water, but at their end are several under water, extending a cable's length to the S.E., which you must be careful to avoid. On the south or larboard side are five *brick pillars*, being part of a Roman mole or bridge: they are level with the water, and on the side stands a fisherman's storehouse, with a chapel above it. At the bottom of this harbour is a large sheet of water, not above 4 or 5 feet deep, and beyond it the lake, where formerly stood a town, which has been swallowed up; this lake has a communication with the sea by a sluice in the bottom of the harbour. To sail into the port of Miseno, you should not attempt to enter until you have its mouth well open; then sail as near as you can to the pillars before-mentioned, where you will have 4 or 5 fathoms of water: on the starboard side you will see the ruins of several houses under water, which have been sunk by earthquakes; these you must keep clear of. Continue running in to the end of the harbour, and anchor a little within the fisherman's house, which stands on the larboard side, in 3 or 4 fathoms, on oaze and weeds; but go not beyond a little hill of rocks, for the water becomes suddenly shallow; neither should you come within a cable's length of this shore, because of the houses which you will see under water. When you are got into the port, as above directed, you will lie safe from all winds. The S.E. wind blows full in the harbour, and, with a fresh gale, you will not be able to get out, because of a great swell, which breaks all across the entrance.

BAIA.—At a mile and a half to the northward of Punta de Penati, which is the north point of Port Miseno, is the castle of Baia, standing on a steep point, off which is a rock level with the water, with a battery on it. At about three-quarters of a mile northward [*North by West*] from this point is a very conspicuous point, called the Point of the *Baths:* the shore between forms a bay; and, nearly mid-way, on a low point, is a battery, off which, about a cable's length, is a ledge of rocks, with only 4 feet of water over them: there are, likewise, several rocks around the battery, but especially toward the point of the Baths, which stretch out about 2½ cables' length.

The best anchoring-place in the *Road of Baia* is between the two batteries, (which are level with the water,) at about two or three cables' length from the shore, in from 9 to 5 fathoms, on oaze and weeds: the first anchor is generally let go, according to the wind, in 10 or 12 fathoms: but do not advance too near the point of the Baths, lest you touch on the rocks or ruins above mentioned. You may lay out your second anchor toward the castle of Baia; but there is a rock under water, between a house, which is below the castle and the anchoring-place, which you must be aware of, lest it should cut your cable. In the bottom of this small bay, beyond the large battery, between it and the point of the Baths, is a sandy beach, off which you may anchor in 3 fathoms of water, good ground; but it is necessary to be well acquainted with the rocks, which, as before said, lie on both sides under water, and pass between them and the other rock, which is almost level with

with the water, opposite to the battery, leaving this last on your larboard hand, as likewise the battery, which you must not approach. You may anchor within the battery, in 3 or 4 fathoms of water, on sandy ground, and carry fasts on shore, with a good anchor down to the eastward [*E.N.E.*].

To avoid the dangers on both sides, you should lie with your stern toward *Pozzuoli*, and your head toward two pillars which you will see on a sloping side of the mountain, above a temple, in the bottom of this shore: there is another near the sea, built of bricks, formerly dedicated to Mercury; and, near the point of the Baths, are the ruins of one dedicated to Venus. Near the middlemost, or brick-built temple, is another very large one, half in ruins, in which the voice circulates along its walls, as it does in the whispering-gallery of St. Paul's, in London. On the top of the point of the baths is a large inscription on white marble, and, toward the sea, are several subterraneous passages, hewn out of the solid rock; they extend a great way into the mountain, and lead to several baths of mineral-waters, and to several apartments both to the right and left. Here also, is, on one side, a bath of hot-water, called the *Bath* of the *Sun;* and, close to it, another extremely cold, called the *Bath* of the *Moon:* beyond these, are those of the *Cumean Sybil,* near the castle of Baia.

POZZUOLI.—This town lies about 1½ mile E. ½ S. [*E. by N.*] from Baia Castle: the land between forms a deep bay, but is rendered dangerous by the ruins of houses and towers, and of several rocks, many of which are nearly level with the water, and lie a great way from the shore, having 7, 8, or 10, fathoms near them. The coast is sandy between the point of the Baths and these ruins: and, behind it, is the Lake of Lucrino, in the middle of which there are 30 fathoms of water, where a town formerly stood.

Pozzuoli is now a small town, situated upon a low point by the sea-side, and is famous for its magnificent structures, built by the Romans. Both ships and galleys anchor before the town, to the northward of the ruins of an antient mole, and opposite a sandy beach, at about two cables' length off, in 10 to 4 fathoms of water, mud and weeds, and fasten a hawser to the pillars. You must not go near the shore to the northward, because the water shallows quickly: the out-winds cause a great swell of the sea. About half a mile to the eastward of the town is the *Solfatara,* or Sulphur Hill, where the inhabitants collect brimstone.

NISITA ISLANDS.—From Cape Miseno the Isle of Nisita lies East [*E.N.E.* ½ *E.*] one league, and, from Pozzuoli to the same island, the distance is a little more than two miles. Between Pozzuoli and Nisita is a wide bay, with a sandy shore, where, in case of necessity, you may anchor with land-winds; but be cautious that you are not caught with the sea-winds; for all the shore is skirted with rocks, both above and under water, so that it cannot be approached: in the bottom of the shore is a very fine plain, with several antient baths upon it.

Nisita is high and covered with trees, and lies about a quarter of a mile from the coast to the eastward of it; a large fortified tower stands on the highest part of the island; and, to the S.W., is a small creek, in which two galleys may anchor in 3 or 4 fathoms of water. To the northward of the island are the remains of a small mole, part of it being under water: you may anchor with galleys near the mole to the eastward, in 3 to 5 fathoms, mud and weeds. Midway between the island and the main land, is a long steep rock, with an infirmary on it, opposite which, on the island, are some houses near the sea, and a kay for landing; but you cannot pass between this rock and the island, unless in boats, because of the ruins of a bridge; neither is there a passage for any thing but boats between the rock and the main. To the eastward of Nisita, about a mile, is the point of La Gajola, very high; and, off its end, is a small island, with a shoal; but there is no passage between, except for boats: upon this island are the ruins of a tower; and, toward the coast, a temple, called the *School of Virgil.*

Remarks *on the* Bay *of* Baia, *by a* British Officer.

"In the Bay of Baia, the entrance of which is between Mount Miseno and the Island Nisita, there is good anchorage. The bay extends N.W. and S.E., and is well sheltered from the winds, excepting those from the E.S.E. to South, which face the entrance, and it is exposed to the sea only by the passage between Capri and the main, which is of little or no consequence.

"In sailing inward, you must keep the western shore aboard; and, after passing the town of Pozzuoli, or Caligula's Bridge, in standing to the eastward, never open the passage between the Island of Nisita (the Quarantine Island) and the main; nor go higher up the bay than to bring a remarkable umbrella-tree, which stands on the summit of a hill, on the larboard hand, on with the south end of the white house, or cooperage, to the northward of the jetty. The best anchorage is in 5 or 6 fathoms, with the low fort of Baia on with the east end of the Island of Capri; the Island of Nisita S.E. by E., and the town of Pozzuoli East, at about 2¼ or 3 cables' length from the fort: here you will have good holding-ground. The only place for fresh water is at the *Pratique House*, which is at the foot of the high fort, bearing from the above anchorage about S. by W., but it is scarce, and not very good. Provisions and wine are brought from Naples. Wood may be had, in small quantities, by purchase: vegetables, fruit, and other refreshments, are abundant."

NAPLES.—From the point called La Gajola, to that of Posilipo, the distance is rather more than a mile; the coast between is moderately high, and overspread with large houses: there are several others along this coast, level with or under the water, likewise several rocks under water, a great way out; for which reasons you should keep, at least, a mile from the shore. At the point of Posilipo, which is known by a very large white house on its top, you begin to discover the city of Naples, as you sail along shore; but you must take care to avoid the dangers, which lie off this point, consisting of pillars, houses, towers, &c., which have been sunk by the earthquakes; you may, however, pass about two cables' length from these dangers, in 3 or 4 fathoms of water, and shortly after have 10 or 12 fathoms.

About 2½ miles E.N.E. [*N.E. ½ E.*] from the *Point of Posilipo* stands the Castle del Ovo, upon a rock; between, the land forms a deep hollow; and about half way is a large point, covered with palaces and magnificent buildings, with a church called *Sta. Maria del Porto.* Between this point and *Castle del Ovo* is a large sandy beach, all along which are stately buildings, and a long row of trees, which compose the finest walks about the city of Naples: this place is called *Chiaga.* In the middle of the landing-place is a chapel, nearly surrounded by the sea, called the chapel of *St. Bernard;* and, at the end of the beach to the westward, is the entrance of the *Grotto* of *Pozzuoli,* cut through a high mountain, which has a village and a forest of trees upon it.

The CITY of NAPLES, famous for its beauty, stands in a fine plain near the sea: it abounds with churches, palaces, forts, and castles, especially toward the sea; one of which stands upon a rising ground above the city, called the *Fort of St. Elmo:* this fort commands the whole city, and near it is a *Carthusian convent.* By the seaside, before the city, is an ancient castle, called *Castle Nuovo:* it is a considerable fortification, and returns the salutes which foreigners make to the city. Near it, to the westward, is the royal palace, which is very magnificent; and adjoining it is the arsenal for building frigates and vessels of an inferior class. The basin is near the arsenal, and can contain 10 or 12 galleys, defended by an antient tower, which is in good condition, and some other works. The Castle del Ovo, before mentioned, is the outermost work belonging to the city: it stands on a point of rocks, and is well fortified on all sides. Before the city there is a mole, almost in the form of the letter L, upon the elbow of which stands a high but slender brick tower, which exhibits a fixed light; there is also a lower light on the mole-head to the S.W. The lights obviate the necessity of taking a pilot for the harbour, which may be entered with safety. For a figure of the light-tower, see the chart.

On the extremity of the mole, is a very good fort, and, near to it, a gun and bomb battery. The entrance to the mole lies to the N.E., and in it are 3 or 4 fathoms of water: it is spacious, and capable of containing a great number of vessels, whereof frigates and large ships lie near the mole-head, and smaller vessels lie nearer in toward the city, where there is less water. You lie here secure from all winds; but those from the south-westward bring in a great swell. Small ships frequently anchor on the outside, near the mole-head; but ships of war generally lie farther out, about a mile to the southward [*S.S.E.*] of the lighthouse, in 30 or 35 fathoms of water.

REMARKS *on the* BAY *of* NAPLES, *by* MR. WM. SMITH.

The Bay of Naples lies between the Islands of Ischia and Procida, and Cape Miseno on the N.W., and the Island Capri and Cape Campanella on the S.E. sides. In steering for

for this bay, from the eastward, make the Island of Capri, which is high and rugged, and lies 3 miles West, southerly, from Cape Campanella. There is a good passage between, which may be used according to the winds.*

In advancing from the westward, steer for the Island Ischia, which is high in the centre, and slopes down on all sides. In moderately clear weather, it may be seen at the distance of 60 or 65 miles. There is a good passage through between Ischia and Procida, and also between Procida and Cape Miseno; that between Procida and Cape Miseno is more than a mile wide; and has no less than 7 fathoms of water in it, in mid-channel.

If bound into Naples Bay, after having the bay open, and Mount Vesuvius can be seen, (which generally shows a light by night, and a thick smoke rising from it by day,) bring it to bear N.E. by E., then steer for it, or keep it a little on the starboard bow, which will lead you in until you get sight of the city of Naples: you may then steer for the city, and take up an anchorage. In coming in by night, steer into the bay until you get sight of the light on the mole-head; bring that light to bear N.N.W. ½ W. or N.W. by N., then steer for it, and keep your lead going, and anchor in what depth you please, from 20 to 14 fathoms. There is no danger in going in or out of this bay, consequently pilots are not required.

The best anchoring-marks are, Fort St. Elmo on, or a little open to the westward of, the lighthouse on the Mole-head, and Posilipo point a sail's breadth or two open to the southward of *Castle del Ovo*, in from 18 to 14 fathoms of water, mud and clay. There are several wrecks in this bay, near or on one of which his Majesty's ship Tagus lost an anchor, on the 5th of December, 1817; and, near or on another, his Majesty's brig Satellite also lost an anchor, on the 25th December, 1817. By observing the above anchoring-marks, you may be sure of being inside, and clear of them. Winds that occasion the most sea here are from S.S.W. to W.S.W. Merchant-ships and most of the Neapolitan navy lie at the mole, where boats may always land. Here is no regular tide, but a rise and fall of water, occasioned by the winds in S.W. gales. There is a strong outset round the mole-head, so the nearer that ships lie to the mole they will ride the easier, with a gale from that quarter.

Wood and water may be obtained in any quantity. You get the water in the mole from pipes, laid down for that purpose, and wood may be purchased tolerably cheap. Fresh beef, wines, and refreshments of all kinds, may be had in great plenty, and at a very reasonable rate.

Naples is commanded by Fort St. Elmo, which stands on the heights above the city. The mole and anchorage are commanded by the Castle Nuovo and the battery on the mole-head. Castle del Ovo is the outermost work, and is of considerable strength.

The trade is considerable, but mostly carried on by foreign vessels, as the Neapolitans have very few vessels of their own. A great quantity of fish is brought from Newfoundland by English ships.

The following Remarks, on the Port of Naples, were made on visiting this place, in the month of January, 1833, by Captain the *Hon. F. W. Grey*, of H.M. frigate *Actæon*:

"The anchorage in the Bay of Naples at this season, being very much exposed, it was an object of importance to get the ship into the mole; and it may, perhaps, be useful to mention that the permission for this purpose is obtained by the consul, and that, on his application to the Minister of Marine, every assistance is afforded by the dock-yard. A lump was sent to us early on the following morning, to convey our powder to a magazine at Posilipo; hawsers were laid out in readiness, and the master of a corvette sent to take the ship in. We let go our anchor at the entrance, and hauled in, mooring with a stream cable, for a bow-fast, and two bower cables of a Neapolitan frigate for quarter-fasts. It was necessary to make an application for permission to use these cables, which is much preferable to laying an anchor out for the larboard quarter-fast, as, from the number of cables and anchors about, it would be very difficult to lay it clear. The stern moorings are of the most consequence, as the heaviest breezes come from the S.E. and S.W., and having good scope of cable on the bower-anchor, a ship is well secured to the northward.

"Water we obtained from a tank vessel belonging to the dock-yard; and I cannot speak too highly of the readiness with which all our requests were granted, and our wants supplied, by the intendant of the arsenal.

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* This channel is described hereafter.

'The

"The water at the entrance of the mole is very shoal, the deepest being 24 feet, close to the mole-end; the bottom is soft mud, and although we took the ground with our heel in going in, we had no difficulty in hauling clear. We remained in the mole till the 26th of March. The weather during the time, upon the whole, was fine, with occasional gales of wind from the westward. The prevailing winds were westerly and south-westerly, the latter generally accompanied with rain."

Anchorage in the Bay.—"On the 26th we hauled out of the mole, and on the 27th received Prince Charles on board, and ran over to Sorrento, returning the same evening to our anchorage off the town. In the Bay our anchorages were as follow:

"*First,* in 12 fathoms, the Mole lighthouse N.W. ½ N. and Castle del Ovo (point) W.S.W. ½ W. *Second,* in 11 fathoms, Mole lighthouse, N.W. ½ N., and Point del Ovo S.W. by W. ½ W.: *Third,* in 13 fathoms, Mole lighthouse North; Point del Ovo W.S.W. ½ W.; St. Elmo, N.W. ½ W.

"These are all good berths; the best, I think, are with Point del Ovo from W.S.W. ½ W. to W.S.W., and the Mole lighthouse from North to N.W., in 12 to 14 fathoms. You should not bring Point del Ovo so far to the westward as W. by S., as you would then run the risk of dropping your anchor upon some wrecks which lie between the following bearings, in from 18 to 25 fathoms:—Lighthouse, W. ½ N. to N.W. ½ W.; Point del Ovo W. by N. to W. by S.

"We remained at our anchorage till the 6th of April; on the second we had a very heavy gale from the southward, which threw a heavy sea into the bay, but the ship rode very easily."—*Nautical Magazine, September,* 1834.

To another British Officer we are indebted for the following.

"With the wind from the S.S.E. to S.W. a great swell sets into the bay. The best anchorage is with the point of Posilipo nearly in one with Castle Ovo, and the high light-house on the mole bearing N.W. or N.W. by N., in 10 or 11 fathoms, about half a mile from the mole-head; there you will have good holding ground; and, in case of necessity, be ready to run into the mole, the head of which has a low lighthouse on it, and with the above marks on, will bear about North, and Point Posilipo about S.W.

"Wood is to be had here, in small quantities, by purchasing; and plenty of very good water in the mole, where the casks are filled in the boat, with a leathern hose. In fine weather, boats may land in any part of the bay; but, in blowing weather, there is no good landing but in the mole. A great trade is carried on here, but chiefly in foreign bottoms; the king has several ships of war, which lie up in the mole, and are built at Castell' a Mare, on the S.E. side of the bay. Small vessels of war and galleys are built in the arsenal, which lies between Castle Ovo and the mole. No salutes pass here, but British officers are generally treated in the most friendly manner." [1817.]

FROM the MOLE of NAPLES to CAPE BRUNO, near the southern foot of Vesuvius, the bearing and distance are S.E. by S. [*S.E.* ½ *E.*] 8 miles. The coast between is low and smooth, and has several sandy beaches, towns, and villages. The first village is called *Cuvalerisa,* near to which a small river runs into the sea. Over this river, and not far from the sea, is a large stone bridge called *Ponta della Maddalena,* or Magdalen's Bridge: the next village, on the sea-side, is *S. Giovanni a Teduccion:* then two others, *Pietra Bianca,* and *Portici.* A point of rocks here stretches a little way into the sea, near to which is *Resina* tower, with a village near it of the same name: the next town is that called *Torre del Greco,* and between are several watch-towers along the coast, within which, at the distance of about 3 miles, is *Mount Vesuvius.*

CASTELL' a MARE, which lies at the distance of 13 miles S.E. by S. [*S.E.* ½ *E.*] from Naples lighthouse, and 5 miles from Cape Bruno, is a small town, situate at the top of a high mountain on the sea-side; the land between it and Cape Bruno forms a deep bay, with a sandy beach, near the middle of which, on a small island, is *Fort Revigliano.* The town of Annunziata is at the bottom of this bay, to the northward; it has a watch-tower at each end: close to Fort Revigliano, to the westward, are 5 or 6 fathoms of water.

Before the town of Castell' a Mare is a little *mole,* in form of a hook, extending to the E.N.E., capable of containing a few barks; but, in fine weather, you may lie off the mole-head, in 5 fathoms of water, and fasten a hawser on shore, where there are anchors and rings. At the S.W. end of the town, near to a tower on the sea-side, is an excellent spring:

spring: this place is fit for galleys only to lie in, in the summer-season; but they should not remain here in the night, lest they be caught by sea-winds. Outside the mole, to the S.W., is a *convent*, upon a rocky point, near to which is a tunny-fishery.

Westward from the mole of Castell' a Mare, 1¼ mile, is *Cape d'Orlando*, and at a mile and a half farther S.S.W. is the village of Vico; the coast between is very high and steep, and has several rocks about it. About half a mile to the westward of Vico is a large point, *Punta d'Equa*, stretching out a little way into the sea, having a watch-tower on it, and several more near it; between this point and Vico you may anchor in 8 or 9 fathoms of water, on mud and weeds. From Point Equa to *Cape Sorrento* is about 2¾ miles W.S.W. ½ W.: this cape has also a watch-tower on it; between, is a bay, of which the coast is steep and smooth at the top, but hollowed into subterraneous cells by the Romans; above, is the charming *Plain of Sorrento*, with several large houses and fine trees upon it. In the south part of this bay, about a mile from the cape, is the town of Sorrento, close to which, on the sea-side, are two small forts to defend the anchorage. You may anchor before the town, near the cape, in 7 or 8 fathoms of water, mud and weeds; off the cape are several rocks, both above and under water.

SORRENTO is situated on the side of a hill, rising from the sea-shore, between the mountains of Vico and Massa, by which it is sheltered. Its situation is delightful, being surrounded with gardens and hills. Here are fruit-trees of every kind, among which the orange and lemon are pre-eminent. The wines have been celebrated both by antients and moderns. The water which descends from the hills is collected in twenty-seven reservoirs, (a work of the antient Romans,) and is noted for its salubrity and sweetness. There are many baths in the vicinity. The greater part of the present inhabitants are goldsmiths, seamen, and fishermen. Many of the women are employed in breeding silkworms and weaving the silk.

From the Cape of Sorrento the *Capo di Massa* bears S.W. by W. ½ W. [*S.W.*] one mile and a quarter; and from Cape Massa to *Capo di Corno* the bearing is S.W. ½ S. [*S.S.W.*] nearly the same distance. Within the latter, to the east, is the village of *Massa*, about which are several rocks. On the shore is an antient temple, adorned with marble columns, and now converted into a church, dedicated to St. Peter. On the cape is a high watch-tower.

At three-quarters of a mile to the northward from Cape Corno, and at nearly the same distance westward from Cape Massa, is a high rock, called *Lo Vervice*, having around it from 14 to 17 fathoms of water: another rock lies near the land of Corno, to the west. In the middle of the channel between the two rocks the depth is 30 fathoms.

From Cape Corno to the next projection southward is three-quarters of a mile. On this stands the tower of *S. Lorenzo*, to the E.S.E. of which is the village of *Marciano*. From the last the extreme point of *Campanella* bears S. by W. ½ W. [*South*] two miles distant.

CAPRI.—The east point of this island lies W.N.W. ¾ W. [nearly *West*] 3 miles from the extremity of Cape Campanella. From this point the greatest length of the island is 3½ miles to the W.S.W. Its eastern and western ends are both very high, but these are connected by a neck of lower land. The western half is a vast mass of rock, of great height, and inaccessible from the sea. The eastern end also rises in elevated precipices, but between the two is a valley covered with fig-trees, almonds, oranges, olives, myrtles, and vines, presenting a singular and highly-interesting contrast with the rocky precipices on each side. Capri has several springs of good water, and about fifteen hundred inhabitants, who occupy the town in the valley and several villages. The climate here is like a perpetual spring. Vast flocks of quails alight annually, in the month of March, of which great quantities are taken in nets, and sent to Naples.

On the N.E. side of the island is a bay, with a sandy beach, on which are several fishermen's houses. Above this beach, between the rising grounds on each side, is the small town of Capri, already noticed, near to which is an antient castle: upon the top of the eastern point is an antique building, said to be the sepulchre of Tiberius Cæsar. In cases of necessity you may anchor before the bay, with South and S.W. winds, within a small cannon-shot of the landing-place, in 4 or 5 fathoms, on mud and weeds; but, at a little distance further off, the depths are from 15 to 25 fathoms. Close to the island are some rocks, both above and under water; but you may sail all round, at a short distance, without danger.

There is a good channel between Capri and Cape Campanella, having 14 to 15 fathoms near the island, 15 to 20 near the cape, and, in the mid-channel, from 60 to 80 fathoms: but,

but, unfortunately, a sunken rock lies about half-way between the island and the cape, with 35 fathoms close to it. This rock may easily be avoided, in sailing through the channel, by keeping over either to the island or the main.

GULF or BAY of SALERNO.—The high land of the Promontory which terminates in the point of Campanella, extends far to the eastward, and has under it, upon the southern shore, the towns of *Amalfi*, *Atrani*, *Minuri*, *Majuri*, and *Vietri*, besides a number of villages. The western part of this land, with Vesuvius N.N.E. by compass, appears as shown in the annexed figure.

rr Point Campanella, N. by E. ½ E. *r Vesuvius, N.N.E.*

From Point Campanella the *Punta di Montalto* bears nearly true *East*, three-quarters of a mile; the land between forms a cove called *Cala della Creta*, the coast of which is steep-to, and the water deep. At the distance of 3½ miles to the eastward of the latter are three rocky islets, called *Li Galli*, which were the *Syrenusæ* of the antients, or supposed abode of the *Syrens*, those fabulous beings who were said, by their music or singing, to decoy mariners to their destruction.

The first town of consideration to the eastward of these islets is AMALFI, at the distance of 3 leagues. This place was once celebrated for its trade with the Levant, which afterward centred at Venice, and has also been noted as the place where the mariner's compass was perfected by *Flavio de Giova*, in 1302; it has no port, and its road is open to the South and S.E.; but vessels may lie sheltered from the winds from N.W. to N.E. under the high land.

Between Amalfi and VIETRI, which lies between two and three leagues more to the eastward, are the other towns already noticed. Vietri has lately been described by Mr. Eustace as a large and flourishing town, straggling down to the sea-shore, and having a convenient little port. Near the Marina exist several vestiges of antient buildings. In an excavation made in 1675, a beautiful pavement was found, long streets were uncovered, and several marble urns dug up; and, in more recent excavations, the remains of antient aqueducts, pieces of columns, and ruined edifices, have been discovered. According to Romanelli and others, this was the site of the antient city of *Marcina*.

SALERNO [ant. *Salernum*] lies at the distance of only one mile to the eastward of Vietri. It appears white, is populous, stretched along the beach, and backed by a ruined castle on the hill above. The country around is fertile and pleasant, presenting a range of hills, covered with olive-groves, orchards, and corn-fields.

The Roads before Vietri and Salerno are good, and both lie in a bay sheltered by high land on the west, and over which there are regular soundings to the shore on each side. Salerno has a small mole, within which the depth is only six feet, but half a mile without it are 10 fathoms. The chart is sufficient to show that this place is entirely exposed to all winds between S.E. by the South to S.W.

From Salerno the coast, to the south-eastward, declines to a smooth sandy beach, which thus continues to the distance of 7 leagues. Above this beach, at the distance of 6½ leagues from Salerno, are the remains of *Paestum*, now *Pesto*, famous for its roses in spring and autumn. The antient walls are still standing, nearly entire, and rather more than two miles in circumference; there are also the remains of several beautiful temples and public buildings.

AGROPOLI, a small town at the mouth of a little river of the same name, lies 4 miles to the southward of Pesto, at the base of high lands, by which it is surrounded on the south and

and east. From Agropoli to the *Point* or *Cape Licosa*, the distance to the S.W. is 8 miles; the shore between is cliffy, with deep water very near it, and the interior land, *Monte Tresino*, &c. is very high. There are towers on the projecting points, and on the south end of Monte Tresino is a conspicuous village, *C. del Abbate*.

CAPE LICOSA.—Cape Licosa is the southern extremity of the Gulf or Bay of Salerno, and the western extremity of a range of high hills extending thence to the south-eastward. The point has a tower on it, and a rocky shoal stretches from it a quarter of a mile to the westward: upon this shoal is an islet, the *Isola Piana*.

At the distance of half a league from the cape, on the west, is a sand-bank, three miles long from north to south, and half a mile in breadth. On its north end are 5 and 6 fathoms, on the south end 10 and 12 fathoms, and on the intermediate parts the soundings vary from 6 to 11. Without this bank, in an extent of 4 miles to the west, are four others, but on all these there is a greater depth of water, and not less on the inner one, which is the shoalest, than 12 fathoms. Between the cape and the inner shoal, the fair channel is a mile in breadth, with no less than 17 fathoms.

The direct bearing and distance from Cape Licosa to the east end of the Isle Capri, at the entrance of the Bay of Naples, are N.W. ½ N. [*N.W. by W.*] 34 miles.

From Cape Licosa *to the E.S.E.* the coast is high, irregular, and destitute of harbours, with rocks, here and there, stretching from the projecting points, and no safe anchorage. The first roadstead worthy of notice is Port Palinuro, which is 8 leagues S.E. ½ S. [*S.E. by E.*] from the cape; it has a fort, off which you may anchor, in 7 or 8 fathoms of water, sheltered by a projecting point from the south and east, but quite exposed to the S.W., West, and N.W.

From Port Palinuro, the coast trends to the E.S.E. and E.N.E., 16 miles, to the town of Policastro, which is situate in the bottom of the bay or gulf of that name. This was the antient *Buxentum*: it is now a place of little importance. You may anchor before the town in 12 or 15 fathoms, but quite exposed to southerly winds.

From Policastro, the coast trends to the E.S.E., S.E., S.S.E., and South, 9 leagues, to the village of Cirella. It is variegated and adorned with six or seven villages, of which that named *Sapri* is 4½ miles from Policastro, at the bottom of a cove, in which there is good anchorage, but open to the South and S.W. A little island, named *Dino*, lies 10 miles to the northward of Cirella, and on the N.E. of this, also, is anchorage for small vessels. Occasional shelter may, also, be found in the little harbour of *Casaletto*, which is a mile to the southward of Dino.

At half a mile to the southward of Cirella is an islet of the same name, with a watch-tower on it. On the N.E. of the islet a small vessel may anchor in case of necessity.

From Cirella Point the coast trends South and S. by E., 16½ leagues, to Cape Suvero. It still continues variegated, and has deep water in general, at a mile from shore. There are several towns and villages along shore, but no haven or port for vessels of any description; you may, however, anchor any where with an off-shore wind.

GULF or BAY of St. EUPHEMIA.—The Bay of this name is that formed by the land between Cape Suvero and Cape Vaticano. The bearing and distance between these capes is S.W. by W. [*S.W.* ½ *S.*], 8 leagues. The town of St. Euphemia, from which the bay takes its name, is two miles from the sea, at the distance of 4 miles true *East* from the tower on Cape Suvero. There are some anchoring-places in the bay, but no haven or place of safety. The best situation seems to be to the westward of the village of *Pizzo*, on the south side, within a sand-bank, which serves to break off the sea, and a sandy beach. The town of *Tropea*, which is 5 miles to the E.N.E. of Cape Vaticano, is built on a rock near the sea: it contains five parish-churches, and is conspicuous. This, as well as other towns on this coast, has suffered greatly from earthquakes, particularly from that of 1783.

The whole of the coast between Tropea and Cape Vaticano is rocky and foul; there are several rocks above water, and particularly the *Scoglio Mantineo*, which lies at two-tenths of a mile off from the cape, leaving between a passage which may be used by small vessels. A similar islet is the *Scoglio Vadero*, a mile more to the northward, and at one-third of a mile from the nearest shore.

GIOJA BAY (Golfo di Gioja).—From Cape Vaticano, the land to the S.E. is very high, as far as the town of *Nicotera*, which is 7 miles distant, and sheltered to the northward

northward by *Monte Poro*. The shore thence, 8 miles to the southward, is a sandy beach, on the southern part of which may be seen the village and tower of *Gioja*, in lat. 38° 25′. The coast again increases in height, with a cliffy shore, and thus it continues nearly 8 miles more, to the village of *Bagnara*, on the west of which is a beach of one mile. Cliffs succeed thence to the town and castle of *Scylla*, at a league and a half to the westward of Bagnara.

SCYLLA is situated partly on the sea-shore, but the greater part above, among the rocks; the streets are narrow, and nine different rows of houses are seen standing immediately one above the other. Over the highest of these straight rows, in rather an oblique direction, are several others. Scylla was dreadfully injured by the memorable earthquake of 1783, when a part of its promontory was thrown into the sea, but the only real danger here is when the current and wind are so opposed as to impel a vessel toward the rock. The town is built partly on the hill, and stretches down to the sea-shore on each side. A tolerable road leads up, though the steepness of the ascent, in several places, renders many windings necessary: the neighbourhood is exceedingly romantic, and there are many public buildings, but they often suffer so severely by lightning, especially the castle, that fatal accidents are frequent. From Scylla, the Faro Point of Sicily bears N.W. by W. ½ W. [*W. by N.*], 2¾ miles. From Scylla to *Punta del Pezzo* the coast rounds westward [*W.S.W.*], 4¼ miles; and, thence to *Cape Pellaro*, it trends 13 miles irregularly to the southward, thus forming two slender bays, and the eastern side of the Faro or Strait of Messina. The only place of importance on this coast is Reggio, the antient *Rhegium*, which stands within a projecting point, at the distance of 5 miles to the northward of Cape Pellaro; and here is anchorage, at a short distance from shore, but the edge of the bank is steep, and all caution is required. There is also anchorage in the bay, at 2½ miles more to the northward. The shore, in the greatest part of the distance above-mentioned, is low and beachy, although the interior land is high. In the bay formed by the line of coast, at half a league to the north-eastward of Cape Pellaro, you may anchor, near the shore, in from 15 to 20 fathoms: and, at half a mile more to the northward, in from 10 to 12 fathoms.

Reggio has been noted for manufactures of stockings, gloves, waistcoats of thread and silk, &c. The environs abound in oranges, citrons, mulberries, and grapes, with some sugar-canes.

The *Cape and Tower dell' Armi* are 4½ miles S. by E. ¼ E. [*S.S.E.* ¼ *E.*] from Cape Pellaro. At a mile and a half to the southward of the latter is the tower and telegraph of Pellaro, on elevated land. At 6 leagues eastward from Cape dell' Armi is *Cape Spartivento*, the S.E. point of Calabria, with its tower: on the coast between are several towers, but nothing else remarkable, and the coast is entirely exposed to the sea.

In his valuable '*Memoir*' on Sicily, Captain Smyth says, "One of the most extraordinary phenomena of this celebrated region is an aerial illusion, called the *Fata Morgana*, from being supposed to be a spectacle under the influence of the queen of the fairies, the 'Morgan la Fay' of popular legends. It occurs during calms, when the weather is warm, and the tides are at the highest; and is said, by some refractive property, to present in the air multiplied images of objects, existing on the coasts, with wonderful precision and magnificence. The most perfect are reported to have been seen from the vicinity of Reggio, about sun-rise. I much doubt, however, the accuracy of the descriptions I have heard and read, as I cannot help thinking that the imagination strongly assists these dioptric appearances, having never met with a Sicilian who had actually seen any thing more than the loom, or *mirage*, consequent on a peculiar state of the atmosphere; but which, I must say, I have here observed, many times, to be unusually strong. It is spoken of, by some, as a luminous ignescent phenomenon, infallibly predictive of an approaching storm."

For a further description see our larger Directory, page 133.

The Currents, &c. in the Faro or Strait of Messina will be noticed hereafter.

IX.—*The* ÆOLIAN ISLES, SICILY, MALTA, GOZO, *and* OTHER ISLANDS *in the* SICILIAN SEA.

1.—THE ÆOLIAN OR LIPARI ISLES.

THESE islands, forming a considerable group off the north coast of Sicily, are the *Æoliæ*, or *Æolidæ*, of the antients. They are exceedingly irregular, and the sea about them is frequently agitated by sudden tempests. The island Lipari is the seat of government of all the islands.

The climate is described by Captain Smyth as highly salubrious, and the weather generally soft and refreshing; but, though there are a few trifling springs, there is a general scarcity of water, as the soil, consisting entirely of scoriæ, tufa, pumice, pozzolana, and ashes, without any intervening stony stratum, except occasional masses of obdurate vitrification, rapidly absorbs the moisture; the natives are, consequently, obliged to construct capacious cisterns, wherein rain-water is kept in a cool temperature.

Cattle are scarce and lean, because the pasturage is fit for goats only; but the lands are well cultivated, and yield grapes, currants, figs, prickly pears, corn, cotton, olives, and pulse; the latter grown under the cane-trellises that support the vines. Rain, if violent, occasions great damage to the grounds, from the situation and friability of the soil; and swarms of locusts sometimes also injure the produce severely. A very considerable quantity of wine and currants is exported, and an active trade carried on in bitumen, pumice, nitre, pozzolana, cinnabar, coral, and fish. Sulphur is still exported; but not in the quantity it might be, in consequence of a prejudice existing that the vapour, arising from the purifying of it, infects the air and injures vegetation.

The native islanders are temperate and hardy, and are esteemed excellent sailors: but, on the other hand, they are considered as inquisitive, mean, and immoral. They are generally poor, but few of them are in the extremity of poverty; and, from leading an active life, they are a very healthy race, though, from dirty habits, the itch is very prevalent through all ranks.

GEODETIC POSITIONS.	Latitude N.				Longitude E.		
Ustica; Fort Falconara	38°	43′	17″	..	13°	11′	10″
Alicudi; church	38	32	41	..	14	16	30
Felicudi; church	38	34	5	..	14	29	37
Salina; Amalfi church	38	35	40	..	14	47	35
Penrose Rocks	38	38	0	..	14	54	30
Lipari; castle	38	27	56	..	14	57	50
Vulcano; sulphur works	38	23	19	..	14	55	56
Panaria; Port Castello	38	37	40	..	15	2	55
Stromboli; church of St. Bartolo	38	48	12	..	15	13	10

USTICA.—This island is remotely situated to the westward of the general groupe, in latitude 38° 42′, and longitude 13° 10′, and at the distance of 35 miles, *N. by W. true*, from Palermo, the capital of Sicily. It is entirely composed of volcanic substances, but extremely fertile. Some banks in the vicinity afford fish, and a quantity of excellent high-coloured coral. The inhabitants amount to 1700, exclusive of the garrison and prisoners. A weekly packet sails hence to Palermo; from which place and Cefalu, on the north coas of Sicily, charcoal and fire-wood, consisting chiefly of olive-roots, are imported.

On several parts of the coast are spacious grottoes, with deep water in them, of which one, on the eastern side, has a singular stalagmitic incrustation of shells, intermixed with lava; and another near it, with a very low entrance, is so roomy within as to form a retreat for the fishermen, on the approach of Barbary cruisers. Off the western side, at about half a mile westward from the steep cliffy cove of the *Passo di Madonna*, is a large and singular rock of lava, called the *Medico*, having deep water around it. The greatest extent of the isle is two miles and three-quarters from N.E. to S.W.

The only village is that of *Santa Maria*, upon a little cove formed by the N.E. coast, but sufficiently large for the trading feluccas which resort to it, and is safe in all winds but the *Scirocco*, hereafter noticed. The town is large in proportion to the population, and has clean regular streets, a church, hospital, school, &c. The cove is only one-tenth of a mile wide, and of the same depth, with 5 fathoms in the middle, and it lies between a hill, named *Falconara*, on the N.E., which has a fort and prison on its summit, and a high bluff on the S.W., distinguished by a stout square tower, which cannot be mistaken. There is also a tower, the *Spalmadora*, which commands a landing-place, on the S.W. side of the island.

Ustica, from a distance, eastward and westward, has the appearance of two small islands, and it may be approached without apprehension, only taking care to avoid *Walker's Rocks*, a small reef of 9 feet, which lie at the distance of one mile N.E. by N. [*N. by E.* ½ *E.*] from the central north point of the island, with from 12 to 7 fathoms around them.

In the vicinity of the island, distant from one and three-quarters to one mile, are three banks with deep water. Of these the *Apollo*, with from 15 to 25 fathoms, lies West [*W.S.W.* ½ *W.*] from the S.W. or Spalmadora Point; the *Diana*, with 11 to 20 fathoms, S.S.E. ½ E. [*S.E.* ½ *S.*] from Point Cavazzi, or the south point; and the *Juno*, with 55 to 80 fathoms, nearly E. by S. [*E.* ¼ *N.*] from the cove of Santa Maria; bottom of coral, &c. *Variation* 18° 57′ W.

Ustica serves as an excellent mark for ships bound to Palermo and the northern ports of Sicily.

ALICUDI.—This island, which is rather larger than Ustica, bears from the latter S.E. by E. ½ E. [*E. by S.*], 50 miles. It is remarkable for its salubrity, and rises abruptly from the sea a conic crater, with irregular ravines and precipitous hills. "Although," says Captain Smyth, "its fires have been extinct for many ages, lava is seen in wild grotesque streams, extending from the summit down to the sea, so harsh and durable as still to retain the steril forbidding appearance of a recent eruption.

"Notwithstanding this discouraging aspect of desolated nature, Alicudi is cultivated with singular and laborious industry, in every place capable of vegetation; and particularly between all the interstices of the shattered masses, where, by constant exertion, barilla, flax, capers, and pulse, are produced; and wheat so peculiarly fine, that it makes, without exception, the best bread I have ever met with."

The population consists of about 260 sturdy peasants, so healthy that diseases are almost unknown amongst them; abstinence is their sovereign remedy for illness, and oil their chief nostrum in cases of accident. The church, which is on the S.E. side, is situated so high up, and the land beneath it so steep, that a view from it is like looking from the mast-head of a ship. The coasts are rude craggy precipices; among them are two small and insecure landing-places, of which the one to the S.E., under a point named Palomba, is the best, and here the fishermen draw their boats up on a patch of sand. Both are very difficult of access in fresh winds.

FELICUDI.—At the distance of two leagues and a half E. ¼ S. [*E. by N.*] from Alicudi is Felicudi, an extinct volcano, with three high mountains. This island is of very irregular shape, nine miles in circumference, fertile, and well cultivated. It produces wheat, barley, grapes, olives, pulse, and flax. The population, about 800, are hardy, industrious, healthy, and peaceable. They reside in mean flat-roofed buildings, on the sides of the hills. Rain-water is preserved in cisterns: there being no other fresh water on the island, with the exception of a little spring, or rather filtering of rain on the summit of *Mont-Agnuolo*, nearly 2000 feet above the level of the sea. The church, a small building, with a house on each side of it, is about half-way up the hill, toward the S.E., and close to an immense dell, called *Fossa delli Felci*, or *Fern Ravine*, which is supposed, by the islanders, to have been the principal crater.

The S.E. end of the island is a little peninsula, of moderate height, and a conical shape, connected to the main body of the island by a low and fertile isthmus, forming a cove on each side, the anchorages in which are very insecure. Of these coves the northern one is called *Conca di Lao*, and the southern *Cala di Speranza:* from the first is a steep and intricate path, leading to the church and principal houses: at about one-third of the way up is a rude battery of one gun, the only artificial defence against pirates.

The coasts are rugged and broken, and exhibit grand masses of basaltiform lava. On the

the western shore, between two points of land, is a curious and astonishing grotto, which may well be imagined to have given the idea of the caves of Æolus. Into this place Captain Smyth rowed, through a perforation of upward of 60 feet wide, and 30 high, forming the entrance to a natural colonnade, widening gradually into an extensive hall with spacious arches. This magnificent cavern is about 160 feet long, 120 broad, and 50 high, and forms a cool retreat; in which several seals were seen.

To the N.W. ½ W. [*W.N.W.*] half a league from the mouth of the cavern just described, a slender rock, called the *Canna*, rises from the sea to the height of 280 feet. From its strong resemblance to a ship before the wind, it has frequently been mistaken for one, and at a little distance. Beside this, there are several other rocks, steep-to, on the western coast, and off *Point Ficarazzi*; on the north coast, the highest shore of the island, is a steep black mass of compact prismatic lava, called the *Fila di Sacca*, with deep water close to it, and a passage for small craft between.

The ISLAND SALINA, about 14 miles in circuit, lies true *East*, 10 miles, from Felicudi. This was once the *Didymé*, or Twins, and afterward the *Thermisia* of the antients. The first name seems to have been acquired from two high conic mountains that distinguish the island to the north and south, and the second from the warm springs or baths, which it still possesses. The origin of the island seems to have been altogether volcanic, and vestiges of its craters may still be seen; but the fires must have ceased before the dawn of history, and they have now become the most pleasing and fertile spots in the whole group of islands.

The population of Salina amounts to about 4000; the men hardy and laborious, but filthy and ferocious; the women, equally dirty, are coarse and masculine. Some kind and hospitable people may, however, be found among them. Both sexes are, more or less, generally infected with the itch.

Between the high mountains to the north and south is a valley extending each way to the sea. This, Captain Smyth says, is so rich and productive as to merit its name of *Fossa Felice* [Happy Valley]; and here the various trees bear with such exuberant luxuriance, that the natives say, the earth is proud of its vigour. In consequence of this fertility, an excellent revenue is derived from the exportation of grain, fruit, pulse, capers, salt, alum, soda, and wines, of which last the fine Malvasia is unrivalled for its grateful qualities.

There are three anchorages, all open to the sea, and to which small vessels resort for produce. Each is distinguished by a church or chapel, surrounded by low flat houses, irregularly scattered. Of these, *Santa Marina* is near the middle of the East coast, on the border of the valley, and may be readily known by its church on the strand, with a large bell suspended to a tree, growing before the door: near it is a pure spring, constantly running, and fresh water may be had by digging any where on the beach.

The south-east end of Salina is *Punta Lingua*, a long low shingly point, having a chapel, at nearly a mile from its southern extremity, and a lunette battery near the latter. An extensive lake, with salines, lie in the interior of Point Lingua. To the southward of the point, the water shoalens to nearly a quarter of a mile out, but beyond the depth of 8 fathoms the strait is clear thence to Lipari.

On the S.W. coast are the rugged rocks of *Punta Spina*, which seems to have fallen perpendicularly from the very summit of the mountain, a height of nearly 2000 feet. Near the middle of the west coast is one of the anchorages already noticed, and the village of *Arenal* or *Arranal*, with its chapel and magazine.

The N.W. coast is singular and abrupt, with stupendous overhanging cliffs. Off this coast is the *Pyramid*, an insulated rock, presenting a lofty red cliff. The hills hereabout abound with game, and form an amphitheatre, enclosing a fertile cultivated valley.

Between a remarkable perforated point, which is the north point of the island, and *Punta Apullara*, its N.E. point, lies the quarter of *Amalfi*, a populous district, of which the heights are well wooded. This is the third of the three anchorages. The houses are scattered about the church, and a few within Point Apullara mark the landing-place. On the point is a chapel and some houses, and, at the landing-place, some magazines excavated in the rock.

On the north coast of Salina there is excellent fishing, and the *Pinna Marina*, a gigantic kind of muscle, termed by the antients the *silk-worm of the sea*, is found in great abundance

ance about the island, with its curious attendant crab. The *Paper Nautilus* is also found here, and generally during the time that hawk's-bill turtle are taken.

PENROSE ROCKS.—Nearly in a line, and in mid-channel, between the north points of Salina and Panaria is a shoal of 4½ fathoms, supposed to be the head of a column of lava; it is covered with marine plants, and much resorted to by fish. The depths around it abruptly increase to 14, 27, and 30 fathoms. It bears from the north point of Salina nearly E. ¼ S. [*E. by N.*] 5¾ miles, and lies with the church of Amalfi immediately under the N.W. peak of Salina, and the western part of Cape Castagna, the N.E. point of Lipari, on with *Monte Rosso*, on the west side of the same island.

LIPARI, the chief island of the Æolian groupe, is separated from Salina by a channel less than 4 miles in breadth. It is about 18 miles in circumference, and now contains about 12,000 persons. Many curious vestiges of antient prosperity remain upon it. The town, *Lipari*, is situated on the S.E. coast, and is defended by a castle, opposite to which, and near the shore, there is anchorage, but exposed to every wind, excepting that which blows over the island. This place is healthy, though crowded, irregular, and dirty, with narrow streets and ruinous public edifices. The castle, which encloses the cathedral and some other buildings, stands on the summit of a mass of volcanic glass. A college is established here, to which belong eight schools, in different parts of the islands.

The BAY of LIPARI is formed on the north by *Monte Rosso*, an immense mass of cleft volcanic matter, of a reddish colour; and, on the south, by *Capo Capistello*, a rugged rock of lava. The distance between these is two miles.

The promontory on which the castle stands divides the bay into two parts. The water at a short distance out is very deep, but there is a spot, about a quarter of a mile to the northward of the castle and off the beach, where a reef of lava stretches out, with 3 fathoms on its head and 6 in its swash; sixteen or seventeen vessels may lie safely between this shoal and the castle, with anchors in 12 or 14 fathoms, and stern-fasts on the shore. Large ships may take anchorage more to the north, under the *Scala di Canelo*, or *St. Giacomo*, where, though the bottom is good, the S.E. wind is inconvenient.

The craft of the island moor to the south of the castle, off the Pratique Office mole, and many fishing-boats in a cove a little more to the south.

The grand features of the island are two mountains; that of *S. Angelo*, toward the centre, and *Guardia* in the south. The first is nearly 1000 feet in height. The interior of the country is singularly rugged, broken, and diversified with hills of volcanic glass, porphyritic lava, pumice, and other vitrifications, many of which must be more than 3000 years old, and yet exhibit no symptom of decomposition. Between the hills are ravines, apparently worn through by the action of heavy rains, and along these the roads lead, often only from 5 to 10 feet wide, between cliffs of a frightful height and aspect. There are also two large plains, well cultivated, and producing fine fruit, cotton, pulse, olives, and other vegetables, besides a three months' supply of corn for the island. The malmsey wine from these plains, of delicious flavour, is well known.

Although Lipari has not suffered from volcanic eruptions for many ages, its subterranean fires are not extinguished; for, on digging in the central parts to a trifling depth, heat, smoke, and a sulphureous scent immediately issue, while hot steams are found in various places.

CANETO, &c.—To the northward of the Bay of Lipari, on the east side of the island, and divided only by the promontory of Monte Rosso, is the *Cala* or *Cove* of *Canelo*, at the bottom of which is the village of that name, prettily situated under the white cliffs of a prodigious mountain of pumice, called *Campo Bianco*. At the northern base of this mountain rises Cape Castagna, the north-eastern promontory of the island.

NORTH COAST.—On the northern coast, to the west of the mountain of Castagna, are the cove and village of *Aqua-calda*, where a vessel may be sheltered from southerly winds, but exposed to nearly all others. On the summit of Monte Corvo, at a mile W.S.W. *true*, from Aqua-calda is the town of *Quattro-pani*, with a church, school, &c.

From *Legna-nera*, or *Corvo Point*, to the N.W. end of the island, a distance of two miles, the coast is a steep cliff, which continues thence to the southward. Off this cliff, at three-quarters of a mile to the E.N.E. of the N.W. point, is a high bold rock, called the *Torricella* or *Turret*. At the same distance, to the S.W. of that point, are two insulated pyramids, off the cliffs of *Permeta*, which are distinguished by a tower, constructed of the finest

finest lithologic specimens in the island, and near which is the grotto called the *Devil's Cave*, with other natural curiosities.

West and South Coasts.—Nearly half-way down the west coast, at nearly three-quarters of a mile from the nearest shore, is the *Scoglio del Bagno*, or the *Bath Rock*, a high and steep mass of lava. True West from this, nearly two miles, is the *Bentinck Reef*, a very dangerous ledge, 200 yards in circuit, and with 2½ fathoms on it, and having a sunken wreck near it, in 17 fathoms. The bank around it has on it from 9 to 35 fathoms, extends more than a mile to the west, and is a good fishery. The hot baths of St. Calogero are on the land to the eastward of the Bath Rock, and their waters flow thence, through a ravine, to the sea.

Near the S.W. headland of Lipari are some insulated rocks called the *Quails*; and, at a mile to the S.S.E. of these, are two others more remarkable. Of the latter, the eastern one, *Pietra Longa*, is a heap of volcanic laminæ, in a highly vitrified state, 150 feet high, with an aperture at its base, through which boats may row; and, at a little distance, it appears so like a ship under sail, as to be very frequently mistaken for one: the other, *La Rocca de Corvacci*, is much lower, and abounds with a kind of large gull, prized by the natives.

Point Chiapparo is the south point of Lipari; to the N.W. of this, one mile, and eastward of Pietra Longa, is the *Praya del Vinco*, a small bay, having a perfectly safe channel, which affords occasional anchorage during a northerly gale, although at times there is a disagreeable ripple, occasioned by current.

VULCANO.—The Island Vulcano lies directly to the southward of Lipari, the narrowest part of the strait between being only one mile in breadth, though of great depth. This island is of a very irregular shape, particularly toward the N.E., where it forms the peninsula called *Vulcanello*, or the *Little Vulcan*, and is about 15 miles in circuit.

Vulcano is very high, and wonderfully variegated by the convulsions of nature; it contains a rich variety of pumices, and salts, and sulphur, in all its different states, with lavas and vitrifications. The interior is mostly a steril valley of powdered cinders, and much too warm for cultivation. A great part of the shore, on the south-east, presents a precipitous mass of lava, scoriæ, pumice, and ashes, of the most steril and forbidding aspect.

In the central part, toward the south, is *Monte dell' Aria*, the highest mountain in the island; and, at two miles to the northward of this is the *Great Crater*, of which Captain Smyth has given a glowing and beautiful description. A deep valley detaches this crater from the neighbouring hills. On gaining its edge, "a more superb and pleasing spectacle presents itself within than is afforded either by Ætna or Vesuvius, from the magnitude of its dimensions, and the magnificence of the brilliant colours that every where strike the eye." From the bottom of it was a frequent explosion of gases, and a continued roar, similar to that of a cataract, or rather of many anchor-smiths' forges, apparently arising from some vast abyss of central fires. By night a pale lambent flame may be seen to issue from many of the fissures.

Vulcanello stands to the N.E. of the Great Crater, and is connected to the main part of the island by a rock formed of its own lava. It is so constituted as to form the two ports or harbours of the island; *Porto Levante*, facing the east, and *Porto Ponente*, facing the north and the island Lipari. This portion of land emerged from the sea about 180 B. C.; it has now two craters, neither of them large; one is extinct and fast filling up; but, from the other a rumbling noise is heard, and it frequently emits smoke.

However steril may be the greater portion of the island, some farmers of Lipari have succeeded, by experiment, in proving that the southern shores will yield grapes, flax, barilla, vegetables, pulse, and fruit, and the best corn in the islands, excepting that of Alicudi: from this coast, as the ground rises to the acclivity of the mountain, a slight vegetation of lichens and dwarf shrubs affords food to several large flocks of goats. Toward the middle of this desolate valley is a spring of fresh water, conveniently furnished with a good stone trough. Upon the whole, the exports of the island seem likely to increase.

Porto Ponente, in the middle of the north side of Vulcano, is very picturesque, and affords excellent shelter for small vessels, in from 2½ to 5 fathoms, bottom of black sand. In the winter a N.W. gale will, at times, set a heavy undertow into this place, but a vessel then may easily weigh and shift round to Porto Levante, and there lie, nearly under the crater of Vulcanello, in perfect security, on a singular sulphureous bottom.

At

At the anchorage in Porto Levante, internal rumblings, like distant thunder, may be heard: and on these occasions the clouds arise from the great crater with greater activity and density.

On leaving Porto Ponente, for the westward, you pass the *Turk's Point*, an abrupt mass of lava, one mile from the port, and steep-to. Between this point and *Point Monaco*, the N.W. point of the island, is the *Cala di Formaggio*, a cave, with a rock in the centre, resorted to by fishermen during Scirocco or southerly winds.

The west coast is bold and craggy, and has a deep cavern called the *Grotta del Cavallo*, off which is a steep detached rock, the *Pietra della Quieta*, with a narrow passage between it and the land.

Half a league south from the Quieta Rock is *Cape Rotta di Batti* or *Point Rosario*, the S.W. end of Vulcano: a part of it has fallen into the sea, from the corrosion of its base, and formed a dangerous spit. Beyond this point the south coast of the island is generally bold, and the land in a good state of cultivation.

PANARIA, AND ITS ISLETS.—Panaria lies at the distance of 10 miles E. ¼ N. *true* from the north end of Salina, and 5 miles N. by E. *true* from Cape Castagna, the N.E. end of Lipari. This island, having warm baths, was called *Thermisia* by the Romans, and numerous vestiges prove it to have been a place of consideration. It is nearly 7 miles in circuit, and contains about 200 inhabitants. Its soil is very rich and well cultivated, particularly to the eastward, and produces wheat, barley, fruit, oil, wine, pulse, and soda. Fishing is here a profitable employment. The church and village are on the eastern shore. On the south side of the island is the *Cala del Castello*, a good port for small vessels. It has been named from a hill above it, which has a peaked summit, and has the only beach of yellow sand in all the islands.

At half a league to the south-eastward of the port of Castello is a small ledge of rocks, named the *Formiche*, or *Ants;* some of the rocks are nearly even with the water's edge: around them is a depth of 10 fathoms, and the channel between them and Panaria is deep and safe, having from 10 to 15 fathoms. Large ships may anchor on good ground, between the Corvo or Crow Rock, which stands near the south point of Panaria, and the Formiche, outside the harbour, in from 10 to 15 fathoms, taking the usual precautions in winter against the sea-winds.

To the eastward and south-eastward of Panaria is the cluster of islets named the GROUP of DATTOLI, an assemblage of shattered fragments, which may possibly have once formed a single island.* Of these islets the northernmost, which lie 2½ miles to the eastward of Panaria, are *Basiluzza* and *Lisca Nera*, and the former is the largest islet of the group. This is shaped like a gunner's quoin, with steep sides and a tabled surface; cultivated, although it has only three or four houses on it, and producing corn, flax, and vegetables, but much infested with rabbits. Upon it are vestiges of antient buildings.

At a mile and a quarter from the easternmost point of Panaria is the islet *Dattalo*, a white steep rock of lava, partly in a state of decomposition. In many little cavities of this curious mass the inhabitants place their rude but profitable bee-hives. Between Dattalo and Panaria the channel is safe, and has 30 fathoms of water.

Nearly half a mile east of Dattalo is a cluster of black rocks called *Panarelli*. The channel between these and Basiluzza is rather more than a mile broad, and has from 35 to 40 fathoms; but that between them and Dattalo is narrow, and has only 6 fathoms.

Lisca Bianca, *Tila-navi*, and *Bottaro*, are three islets on one bank, which extends E. by N. and W. by S. [*N.E. by E.* ¼ *E.* and *S.W. by W.* ¼ *W.*] three miles, and nearly parallel with Dattalo and Panarelli, at the distance of one mile and a quarter. The channel between is clear and good. Of these Lisca Bianca is the easternmost; it is a whitish rocky islet, about four miles from Panaria, small, but partially cultivated. Next to this, on the west, one mile distant, is the steril rock Tila-navi, by some called *Lisca Nera*, (black) from its dark appearance, as contrasted with Lisca Bianca (white). In the strait between a strong smell of sulphur is perceptible, and in two places are springs of sulphureous gas, the bubbles of which rise in quick and constant succession to the surface, where they have been known to flame on bursting into the atmospheric air.

Bottaro lies about a mile to the west of Tila-navi; it is low and rocky. To the south-eastward of this islet, about a mile, is a dangerous shoal of rugged lava, which Captain

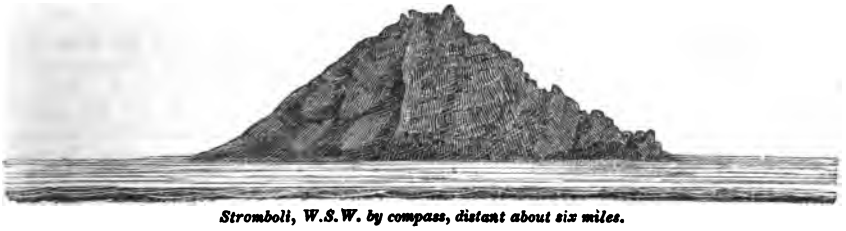
* For the reasons, see Captain Smyth's *Memoir*, &c. page 257.

Smyth

Smyth has called *Anne's Reef;* it has from 2½ to 5 fathoms on it, and 12 near it, in all directions. It lies with Bottaro and Dattalo nearly in one, and Tila-navi on the lower part of Basiluzza.

The EXMOUTH BANK, a bank of coarse sand, shells, and lava, lies at the distance of a league to the south-eastward of the three islets last described. It was discovered by Captain Smyth, and the depths over it are from 15 to 40 fathoms, the shoalest part being to the west. Its breadth, from north to south, is about two miles.

STROMBOLI, the north-easternmost isle of the Æolian group, lies 9½ miles to the north-eastward of Panaria. It is a conical mountain, with an irregular base, upward of 2000 feet in height, and about 9 miles in circumference, and seems to be the entire product of subterranean fires. The inhabitants consist of about 1200 contented and sturdy peasants, under the control of a curate.



Stromboli, W.S.W. by compass, distant about six miles.

The crater of the volcano, which faces the N.W. is about one-third down the side of the mountain from the summit: it is continually burning, with frequent explosions, and a constant ejection of fiery matter; its form is circular, and the diameter about 170 yards. This crater was visited, and has been described, by Captain Smyth, who adds, "When the smoke cleared away, we perceived an undulating ignited substance, which, at short intervals, rose and fell in great agitation; and, when swollen to the utmost height, burst with a violent explosion, and a discharge of red-hot stones, in a semi-fluid state, accompanied with showers of ashes and sand, and a strong sulphureous smell. The masses are usually thrown up to the height of 60 or 70 to 300 feet; but some, the descent of which I computed to occupy from 9 to 12 seconds, must have ascended above 1000. In the moderate ejections, the stones, in their ascent, gradually diverged, like a grand pyrotechnic exhibition, and fell into the abyss again; except on the side next the sea, where they rolled down in quick succession, after bounding from the declivity to a considerable distance in the water.

"This crater burnt, without intermission, from the earliest periods; its incessant fire is supposed to be supported by oxygen, pyrites, and sulphur, but there are no traces of bitumen. It appears to be not only the vent of all these islands, but to have a subterraneous communication with Sicily and Italy; for, previous to a severe earthquake taking place in these parts, Stromboli has been observed to be covered with dense clouds of smoke, and to emit, with increased activity, unusually ardent flames. It appears, moreover, from the concurrent relation of the islanders, to be influenced by atmospheric changes; as storms, particularly those from the southward, are preceded by thick volumes of smoke, so that the native pilots are guided at night by its flame, and gain intimations of the weather in the day-time by its smoke.

With this stupendous volcano existing upon it, it is not less true than wonderful that Stromboli is extremely fertile, has a fine verdure in the cultivated parts, and these, on one side, extend very high up the mountain. The soil is a black mould, composed of argillaceous tufa, scoriæ, pozzolana, and sand. The hedges are of cane reeds, which, when sufficiently strong, are cut down and used as supporters for the vines. The products are, some of the finest wines in the Mediterranean, and a moderate quantity of wheat, barley, cotton, raisins, currants, and figs.

The principal town of Stromboli is on the N.W. side, and divided into two straggling parts, the parishes of *San Vincenzo* and *San Bartolo.* The houses are low, with flat roofs, and there are not more than two or three in the whole island of two stories in height. They are thus built that the prevalent strong winds of winter may not injure them. Vestiges of antient buildings and sepulchres may still be seen. At S. Vicenzo is a constant fountain, supplied from a small spring in the mount.

The beach below the town is composed of a shining black sand, and terminates in a rocky

rocky point, where there is a large cavern, the *Grotto delli Bovi marini*, or *Seals' Cave*: this cavern is 86 feet long, 35 wide at the entrance, and 7 high. Off the point is a steep rock, or mass of indurated pozzolana, about 240 feet high, named *Stromboluzza*, which appears, when seen at a distance, like a ship with studding sails set. There is a depth of 14 fathoms between it and Stromboli.

From S. Bartolo, *westward*, the coast is formed of rugged lava to Point Sciarazza, or nearly a mile: off that point there is a rock, nearly even with the water's edge, a quarter of a mile out, with 40 fathoms, deepening to 70, close to it. Punta Zarroza is the N.W. point of the island, and is half a league more to the west: between these points is a cove immediately below the crater, in which, immediately under the cove, as near as can be approached, is the extraordinary depth of 47 fathoms; and, a few yards farther out, from 65 to 90. Incessant showers of red-hot stones from the volcano frequently fall here. Off Point Zarroza are some sunken rocks, but without them are regular soundings to 60 fathoms, at about a mile out.

From Point Zarroza to the S.W. point of the island, *Punta Inostra*, the coast is a rugged lava. The village of Inostra is within the point on the East, and is distinguished by the church of S. Nicolo. The coast hence, eastward, continues rocky to *Lazara*, a small village standing on a low shingly point. There are several caves on the eastern coast; one of these is over *Punta Lana*, the S.E. point of the island; and a little way up the hill is remarkable as the place where that bright and beautiful mineral called *Specular Iron* is found.

With the exception already noticed, on the north side of the island, there are, in general, gradual soundings all round, decreasing from 20 to 4 fathoms.

2.—The ISLAND of SICILY.

SICILY is more than 170 leagues in circumference, and is still the richest and most important island of the Mediterranean Sea. Interesting from its situation, its soil, its climate, its antient, and even its modern, history, Sicily has been considered as the nurse and granary of Italy; but its modern is very inferior to its antient consequence. Mount Etna, the most celebrated volcano of Europe, stands on the eastern part of the island, and its summit is 10,874 feet above the level of the sea. The island is intersected by ranges of hills, but of these the elevation of the highest peak is only 3690 feet.

DESCRIPTION.—Sicily is rich in minerals, of which the variety is great; and they include silver, lead, copper, &c., rock-salt, bitumen, and gypsum, with marbles, agates, and other valuable stones. The mineral waters, found in every part of the island, both hot and cold, have for ages been celebrated for their efficacy in relieving various disorders. The general temperature of the air and state of the weather are excellent; excepting that, from there being but few running streams, many morasses and pools of stagnant water are formed, the effluvia of which corrupt the air around them, and render it unhealthy. When the sun is in the northern signs, the sky, although it seldom assumes the deep blue tint of the tropics, is, nevertheless, beautifully clear and serene; but after the autumnal equinox, the winds become boisterous, and the atmosphere dense and hazy; the dews and fogs thence increase, particularly on the coasts, and the rain falls in frequent and heavy showers.*

Early in the morning, in summer, it is generally calm; but a breeze springs up at about nine or ten o'clock, freshens until two or three, and gradually subsides again into a calm toward the evening. The winds are variable both in their force and their direction. The most prevalent are the northerly and westerly, which are dry and salubrious, producing, with the clearest sky, the most refreshing sensations. Those from the east, thence rounding southerly, are heavy, and loaded with an unwholesome mist, often accompanied with heavy rain, thunder, and lightning; during which the luminous meteor, called by seamen the *compasant*, is sometimes seen.

At about the time of the vernal equinox, the force of the S.W. wind is very sensibly

* *The mean heat of the sea* around Sicily, at a depth of from 10 to 20 fathoms, is from 73 to 76 degrees, which is from 9 to 12 degrees warmer than the water near the coast to the westward of Gibraltar. *See the Note* *, page 11.

felt

felt along the West and S.W. shores, between Trapani and Girgenti; but, as the sun advances, the wind blows more from the northward, with fresh gales at intervals, which, however, are seldom experienced with violence in bays or harbours, and their power rarely continues longer than forty hours. The most experienced pilots say that storms which commence in the day-time are more violent, and of longer duration, than those which spring up in the night.

The most annoying wind is the *scirocco*, or south-east, which, coming from the deserts of Africa, is moderated by its passage over the sea to a tolerable degree of temperature; and on the east coast, where it first arrives, its effects are inconsiderable; but, seeming to acquire additional heat in its progress over the land, becomes a serious inconvenience as it advances. At its commencement the air is dense and heavy, with long white clouds settling a little below the summits of the mountains, and at sea floating just above the horizon, in a direction parallel to it. The scirocco generally continues three or four days, during which period its influence is such that wine cannot be fined nor meat effectually salted: though blighting in its general effects in summer, it is favorable to the growth of several useful plants in winter. This wind is particularly disagreeable at the city of Palermo, on the N.W. of the island, which is situated in a plain, surrounded on the land side by mountains, which collect the solar rays as if to a focus, and produce a most oppressive heat. At such times the streets are silent and deserted, for the natives can scarcely be prevailed on to move out while it lasts, and they carefully close every window and door of their houses to exclude it. In spring and autumn it is more frequent than in summer, and in winter possesses no disagreeable qualities, excepting to invalids.

In the surrounding sea, waterspouts and other meteoric phænomena are not infrequent, and it is well known that Sicily has ever been subject to alarming and desolating earthquakes, of which the most destructive have generally occurred in the first three months of the year, and mostly after heavy rains, though sometimes, also, in fine weather.

The country, at times, suffers under a drought from April to September, to the serious detriment of the harvest and vintage: particularly in the interior, where the atmosphere is less humid than on the coasts. There are a few showers in autumn, but the regular rains do not usually commence until November, between which month and March, besides occasional snow storms, they fall, at different periods, in very heavy torrents, often accompanied with vivid and very dangerous lightning. During this season, therefore, the effects of cold and humidity are very sensibly experienced; owing, in great measure, to the defective principles on which the houses are generally constructed: for in these scarcely one door or window will be found to shut properly, so that there are strong draughts of air in every direction.

The violent rains that deluge the island at this season swell the rivers, damage the roads, and set the *fiumare* running. By the last is meant the torrents, produced by the waters descending from the mountains, into deep ravines, through which they rush with impetuosity to the sea, carrying every thing before them: but their strength is soon exhausted; and, when dry, their channels become tolerable roads, to the distance of three or four miles inland, exhibiting peculiar picturesque beauties. The boisterous force of the fiumare, while flowing, the badness of the roads, and the want of bridges, render travelling in the winter dangerous; and, at times, wholely impracticable.

Inexperienced travellers expect no cold weather in Sicily; but in this they will find themselves greatly mistaken; though the severity of the winter is not such as to deprive the country of that pleasing aspect which it derives from the variety of ever-greens richly spread over it. Of these, the most conspicuous are the lemon and the orange trees, loaded with their golden fruit. The cold lasts but a short period; for the spring quickly advances, and a profusion of verdure is displayed around. This is the pleasing season that renders the island so delightful, and has drawn forth so many poetic strains in celebration of its charms. The summer is oppressively warm, and precludes the exercises necessary for health; while the heat scorches up the vegetation, and engenders innumerable reptiles and insects. Then the autumn arrives; when a few showers and some variable weather occasion disease in debilitated constitutions, under various symptoms, but chiefly under those inflammations. At this time of the year the evil most to be dreaded is *mal'aria*, or bad air, which produces a kind of yellow fever. This usually begins in June, and increases in virulence until after the first rains in September. It is supposed to originate from the excess of moisture hastening the production of putrid fermentation in decayed vegetable substances, and is generally found on the banks of rivers, near stagnant pools, on the bor-

ders of the numerous fiumare or clefts, and in low or marshy plains, where it is greatly promoted by the culture of rice, flax, and all other productions that require copious irrigation. This deleterious air sometimes reaches high lands, but rarely, except in instances where there are higher in the vicinity. It acts on the constitution chiefly in the night, and during sleep, with an effect more fatal to foreigners than to the natives.

THE APPEARANCE OF THE COASTS OF SICILY is romantic, and these coasts are formed, by nature, into strong positions of defence. The interior presents a combination of mountains, ravines, and valleys; the latter of which, in many parts, branch out into extensive plains, presenting a pleasing assemblage of rural scenes, possessing a soil exuberantly fertile, and animated by numerous flocks and herds, scattered around.

The fine wheat of Sicily has been celebrated in all ages. The crop of wheat is succeeded by hemp, maize, lentils, and other pulse; and, in the ensuing seasons, generally by barley and beans, followed by mixed esculents, and a fallow. The harvest begins in the latter end of June, and continues through July and August. There are not, as have been said, two successive crops of any one thing in the year, except what are forced in such grounds as are artificially irrigated.

The Sicilians are extremely partial to the Indian fig, or prickly pear, the fruit of the *cactus opuntia*; whole families subsist on it during the time it is in season, and find it wholesome, refreshing, and nourishing. Being a very hardy plant, it is found in every part of the island, in the greatest profusion, forming hedges and enclosures, and clothing the fissures of walls, rocks, and ruins, which would otherwise be barren. Hedges are likewise formed of the aloe, which, being also of a hardy nature, will grow even on the sands, exposed to any winds. Pistacio nuts, figs, and almonds, abound, together with the liquorice, and many other valuable plants.

Besides the riches of her mineral and vegetable products, Sicily commands the finest fisheries in the Mediterranean Sea. The tunny is caught in great abundance during the months of May, June, and July.* Of testaceous and crustaceous fish there are many varieties, which afford delicate food. Coral is fished for in many places, but yields the greatest profit to the seamen and merchants of Trapani, on the western side of the island.

THE PRINCIPAL CITIES AND TOWNS OF SICILY are, *Palermo*, the capital, *Catania*, *Messina*, *Trapani*, *Marsala*, *Modica*, and *Calatagirone*. The present population of the island is about 1,645,000 persons.

LIGHT-HOUSES.—On Sicily are Lighthouses at Trapani, Palermo, Milazzo, and the Faro Point, on the north coast; Messina, Augusta, and Syracuse, on the east; and Girgenti on the south; but even at Palermo the light is very defective, as well as those of the Faro Point and Harbour of Messina, described in the Directions.

NORTHERN COAST OF SICILY, FROM CAPE ST. VITO TO THE FARO OF MESSINA.

GEODETIC POSITIONS.	Latitude.			Longitude E.		
Cape St. Vito; the church	38°	12′	26″	12°	45′	58″
Castel a Mare; fortress	38	1	51	12	52	43
Cape di Gallo	38	14	50	13	18	30
PALERMO; lighthouse	38	8	15	13	21	56
——— observatory	38	6	44	13	20	15
Cape Zaffarana	38	6	0	13	34	0
Termini; castle	37	57	28	13	42	0
Cefalu; cathedral	38	0	0	14	3	57
San Stefano	37	57	45	14	21	30
Caronia	37	59	45	14	26	0
Santa Agata; tower	38	1	30	14	36	32
Cape Orlando; castle gate	38	7	46	14	44	30
Cape Calava	38	9	40	14	54	0

* For an enumeration of the fish, and general exports of Sicily, see Captain Smyth's Memoir, pp. 21 to 25, and its Appendix, p. lxvi.

Point

GEODETIC POSITIONS, *continued.*	Latitude.			Longitude E.		
Point Tyndaris	38°	7′	40″	15°	2′	30″
Milazzo; lighthouse	38	15	58	15	14	10
Cape Rasaculmo; telegraph	38	17	56	15	31	57
Faro Lighthouse	38	15	50	15	40	40

The north coast of Sicily presents a steep aspect, and there exist near it scarcely any hidden dangers. The most prevalent winds here are between the S.W. and N.W., and they are generally preceded by a long swell, which rises with their increase. The tides set to the eastward, but do not appear to be influenced so much by the moon as by the weather, and seldom rise or fall more than twenty inches.

CAPE ST. VITO, in latitude 38° 13′, longitude 12° 45′, is the usual landfall to ships coming from the westward. This cape is a rugged mount, with two tabled points extending from it, the westernmost of which is called *Agra*, and the easternmost *Sireno*. In the bight between is anchorage for small vessels, near the church of St. Vito, protected by two stout square towers. Similar towers are erected on commanding points, and defilated on the land side, at regular distances, all round the shores of Sicily. The purpose for which these towers were intended was, that, on the appearance of a vessel, the peasantry should repair to the guns mounted in them, in order to prevent smuggling, to succour a friend, or to annoy an enemy. They are, however, from disuse, greatly neglected, poorly provided, and inhabited generally by only two or three countrymen, who act rather as guards for the health-office, than as soldiers. Beacons are always ready to be lighted, and the alarm along the coast is sounded with conch-shells, similar to the tuba of the Romans.

Large ships, on approaching Cape St. Vito, should give it a berth of, at least, three miles, in order to pass on the north side of a rocky shoal which lies to the northward of the cape: between this shoal and the land is an inner channel, having, in the middle, a depth of 7 or 8 fathoms. When the Agra tower begins to touch Mount Cofano* it marks the extremity of the shoal, on which are from 3½ to 6 fathoms of water, with from 12 to 30 and 50 outside. In heavy gales the sea breaks all over it.

Within the point of Sireno (which has a shelf tailing off it), on the eastern side of the promontory of St. Vito, is the profitable fishery of S. Biro.

The GULF of CASTELL' a MARE is the spacious bay between the land of St. Vito and *Point Rama*. The distance between is 10 miles. This bay, generally, has deep water, and good anchorage near its shores; but it is unsafe in winter, being exposed to northerly winds, which send in a heavy swell, and mostly blow home.

In the bottom of the bay, at 11 miles South [*S. by E.* ¾ *E.*] from Sireno tower is *Castell' a Mare*, a mean dirty town, containing about 5000 inhabitants: yet this town is situated in a finely cultivated neighbourhood, and its people subsist by exporting the produce, of which wine, fruit, grain, manna, and shumac, constitute the principal articles. The castle, erected on a rocky tongue of land, and never strong, is falling fast to decay, while the road leading from the cove to it is so filthy and narrow, as to be even dangerous by night. At a little distance from Castell' a Mare are the interesting remains of a Doric temple, which, with vestiges of an antient theatre, a little to the northward, are the only relics of the antient *Ægesta*, said to have been built by the Trojans.

At three miles to the eastward of the town of Castell' a Mare is the village of *Magazinazzi;* and, at 3 miles farther, that of *Sicarra*. From Castell' a Mare, by these villages, the coast is low and the beach sandy, which contrasts with the opposite side. The N.E. extremity of the gulf is a long tabled cliff, *Cape Rama*, within which, to the eastward, is a conic mount, distinguishing the little towns *Favorotta* and *Cernisi*, which stand under *Mount Orsa*. This elevation, from being seen far off at sea, is generally called *Cape Orsa*. Vessels arriving in summer, to load the manna, carouba, and other produce of the plain, lie off the low white cliffs of Favorotta, but not far from the sandy beach, in from 5 to 9 fathoms. In standing in, toward Cernisi, *Point Molinazzo*, which is to the N.W. of it, must have a wide berth.

FROM POINT RAMA to *Point Uomo Morto*, the West point of *Cape Orso*, the distance

* Cape Cofano, the outer extremity of this mount, which appears like a rugged conic rock, is two leagues to the south-westward of Agra tower.

is

is 4 miles N.E. by E. ¼ E. The coast between is irregular, and thence trends to the eastward. From the point last mentioned to the little isle *Femina* the bearing and distance are nearly East, 6 miles. Between is the Bay of *Carini*. From Femina to Cape di Gallo the distance is 4½ miles E. by S.; and from the last to the extremity of the picturesque land, called *Mount Pellegrino*, 3½ miles, S.S.E. On this mount are two signal-towers.

About the Points Uomo and Orsa the coast is low and shelving. Each point is defended by a good tower, and off the latter is a good fishery. In the Bay of Carini is anchorage with southerly winds, but the water is shallow toward the shore.

At the bottom of the Bay of Carini, on the banks of a rivulet which waters the luxuriant vale of that name, once stood the small but rich city of Hyccara. On a rising ground, two miles of the southward of this, stands the respectable town of Carini, in a beautiful situation, ornamented with a gothic castle, several churches, convents, and public buildings. The isle Femina is the eastern extremity of Carini Bay. It is a rock, rather steep at the north end, and has a strong tower on its summit. There is a passage between it and the coast, through which small boats may pass, and the other parts are bold-to. On *Monte di Gallo* are several caverns, inhabited by goatherds. The cape of this name is a rugged cliff, with brownish red patches, appearing from the offing, like an island. On rounding the cape a high conic rock will be seen to the south-eastward, at the distance of about four leagues: this is *Cape Zaffarana*, the easternmost promontory of the BAY of PALERMO, which is altogether clear of danger.

BAY of PALERMO.—On rounding Cape di Gallo, the beautiful Bay or Gulf of Palermo opens to view. The city of PALERMO is three leagues to the southward of the cape, and the high land between is that of Pelligrino. At the most favorable points of the bay along shore are tunny fisheries, the nets of which must be carefully avoided by vessels approaching, they being so strong and well moored as to be capable of suddenly arresting a ship under full sail.

To the N.E. of the city is a fine mole, extending southward from the arsenal, nearly a quarter of a mile, into 9 or 10 fathoms of water, with a lighthouse and battery at its termination. This light, says Captain Smyth, in common with all the others in Sicily, is very defective, but the whole is a noble and spirited undertaking, which cost the senate nearly a million sterling, and forms a convenient port, capable of containing a great number of vessels. Besides this port there is a small cove in front of the town, called *Cala Felice*, the only remains of the two celebrated antient harbours, the sites of which are still to be traced among the streets of the city.

The *Pratique Office* is on the east side of the Cala Felice, and the usual landing-place is at the steps close to it. The *Lazaretto*, a dirty and inefficient establishment, is in a rocky bay, called *Acqua Santa*, at the back of the mole (northward) under Mount Pellegrino, and near the elegant palace of Prince Belmonte.

Opposite the central part of the *Marina*, or *Strand*, there is a shoal, which, from its situation, size, materials, and form, Captain Smyth thinks must have been created by silt and mud progressively accumulating over the hull of one of the ships sunk in the sanguinary conflict that took place here, after the death of De Ruyter, in 1676.

Palermo stands on a large fertile plain, which, from its shape, from being surrounded by mountains, and from its luxuriance, is called the *Vale of the Golden Shell*, and gives the city the agnomen of *Felix* (Happy). The air is salubrious in general, but in some parts, on the site of the antient ports, mal'aria is generated in autumn. The health of the population, amounting to nearly 180,000 persons, is assisted by the general cleanliness of the streets, and the abundant supply of water. Most of the houses are provided with fountains, even to the second and third stories, which not only promote salutary ablutions, but is one of the greatest luxuries. There is an abundant supply of provisions of every description. During the absence of the moon the principal streets are well lighted. The town, however, lies low, so that after heavy rains it is extremely muddy, at which times recourse is had to moveable iron bridges for crossing the streets.

The city is surrounded by an old wall, of little or no strength, some of the bastions being occupied by gardens, while others have been cut away to increase the breadth of the *Marina*, a public drive on the sea-shore. The citadel stands on the western bank of the Cala Felice; it is calculated for temporary resistance only, but there is a respectable fort,

fort, called the *Galita*, on the opposite side of the cove, and the mole-head battery is tolerably strong.

"Palermo is regularly built; and, with a better finish, might be esteemed an elegant city; but it presents an incongruous mixture of pomp and poverty, of fascinating gaiety and disgusting wretchedness." On a rising ground, and in a romantic situation, at three miles south-westward from Palermo, is the little city of MONREALE, which is distinguished by a cathedral and many remarkable edifices.

ON SAILING INTO THE BAY OF PALERMO, a ship may proceed boldly toward the anchorage, only being guarded on passing the little sandy bay of *Mondello*, which lies within the *Turret Point* of Cape di Gallo: for violent and squally gusts of wind issue, at times, from between Mount Pellegrino and Cape di Gallo, especially in winter. It is, therefore, proper, on standing along the west side of the bay during a fresh breeze, to station hands by the sheets and halyards, and be ready to keep large.

PALERMO, as already shown, is on the S.W. side of the bay. The best anchorage off this place, for a temporary stay, is in an angular direction off the mole, in from 16 to 25 fathoms. Ships should moor with the small bower to the *true* N.W. and the best to the S.E., keeping an open hawse to the N.E.: and, if blowing from the eastward, in winter, they ought to ride with a cable and a half on each bower. Should the gale increase, strike lower yards and topmasts, let go the sheet anchor under foot, and bend the spare cable, as precautions for the worst weather. But though a heavy sea *sends* in, it never rolls home, and Captain Smyth adds, I do not believe that there is the slightest danger, having myself rode out several severe gales.

Chain cables are to be preferred for a certain spell, because a long range is like backing the bowers, and, as several anchors have been lost, they may cut the hempen cables. If a ship parts in N.E. winds, she must inevitably go on shore on the reef under the citadel; for the long swell that sets in from that quarter, renders all exertions to clear it useless. The best spot appears to be in 19 fathoms, stiff clay, about half a mile off shore, with the Mole-lighthouse N.W. by N.; the town of Monreale over the middle of Palermo, W. ¼ S.; the summit of Mount Pellegrino, North; Corsari tower, on the south shore, S.S.E.; and Point Gerbino, the eastern extremity of Palermo Bay, S.E. by E. ¼ E.

The MOLE is capable of containing a great number of vessels, although there is a shoal bank in the middle of it.* The inner port is reserved for the use of the arsenal, having large magazines for naval stores, and prisons for galley slaves. Ships on entering brush the mole-head, and on passing lay out the best bower to the S.W. and haul the stern close to the pier; for the winds that rush through the valley of the Conca d'Oro *(Golden Shell)* are often troublesome. The central part of this port is rocky as well as shallow.

Small craft take shelter in the cove, *Cala Felice*; and here, in summer, vessels of 200 tons may lie securely: but sea-winds occasion a disagreeable grown or ground swell. Water is procured at the kay by filling the casks with hoses that lead into the boats.

There is anchoring ground, near the shore, almost throughout the Bay of Palermo: the exceptions are, a large patch of foul ground, on which the sea breaks heavily during offing winds, stretching from the castle and Cala Felice, and along shore into the Mole-harbour; and, the small foul spot, nearly opposite the central part of the Marina, carrying 11 fathoms of water, and deepening to 18 and 20, where several anchors have been lost.

CAPE ZAFFARANA AND COAST TO THE S.E.—Cape Zaffarana appears from seaward like an island, detached from the high tabled land on the west. It is of a conical form, and considerable height, with a large rock off its base, and a narrow passage, of 4 fathoms in depth, between. The approach is steep, carrying from 15 to 20 fathoms close in. At 2¼ miles S.E. ¾ S. [*S.E. by E.*] from the cape are the *Reefs of Solanto*, which are two ledges of rocks, even with the surface of the water, with 40 fathoms around them, at a short offing distance, and 27 to 15 in the channel between them and the coast.

Within Cape Zaffarana, southward, at three miles from the cape, is the castle and *tonnara*, or tunny fishery, belonging to the king. Two miles and a half more to the southward is the town of *Milicia*, and beyond this, nearly two miles, the smaller town of *Mandero*. The interval between the cape and Mandero is called the *Bay of Solanto*, and here ships,

* See Captain Smyth's beautiful plan of the Environs and Gulf of Palermo.

unable

unable to fetch into the Bay of Palermo, during a westerly gale, may take good anchorage, only avoiding the Rocks of Solanto on going in.

Five miles to the south-eastward [*E.S.E.*] of Mandero is the town and castle of TERMINI, the antient *Thermæ* or Baths, of which there are now few vestiges. The present town, standing on the declivity of a picturesque hill, makes a respectable appearance from the sea. The castle, situated on a high rock, entirely commands the town and coast. The streets are, in general, narrow and dirty, but there are some tolerable buildings, and a population of about 11,000, who derive considerable profit from a fishery of anchovies, and the export of oil, wine, shumac, corn, and rice: this port, having been privileged by Charles V. as a *caricatore*, or loading place, is endowed with immunities for exporting the produce of the country: but, as the anchorage is exposed during two-thirds of the year, it can be frequented by boats only that can be drawn up on the beach.

At five miles eastward of Termini is the site of the antient *Himæra*, celebrated through one of the most disastrous battles recorded in history, and subsequently destroyed by Hannibal. Two miles eastward of this is the mouth of the *Fiume Grande*, one of the largest streams of Sicily. The country hereabout, though rich and picturesque, ranks among the most unhealthy parts of Sicily: almost the whole of its inhabitants are poor and sallow, and general sufferers from mal'aria.

CEFALU, &c.—At 3½ leagues East [*E. by N. ¾ N.*] from the mouth of the Fiume Grande, and on a low projecting point, under a high conical mount, is the town of *Cefalu*, which contains about 9000 inhabitants, and a large cathedral. On the summit of the mount are the ruins of an antient Phœnician edifice, and of a Saracenic castle, &c.

On the western side of Cefalu is a small sandy bay, where coasters find summer anchorage, with from 3 to 7 fathoms; and there is a small pier for the reception of fishing-vessels, to the N.W. of which, at a very small distance, are two shoals, with 8 and 9 fathoms of water on them.*

Within Cefalu, on the east, is a small cove, called *Calura*, where coasters may take shelter under the protection of a tower on the point. Eastward of this, the country, for several miles, as far as the romantic castle of *Pollina*, possesses many picturesque beauties, and is intersected by the *River Ambrosia*, which runs through a deep valley between the mountains. From this valley rush such gusts of wind as to occasion the spot to be called *Mala Portuso*, or *Bad Hole*. It may be known from the offing by the high mount to the eastward of it, which is crowned by the castle of Pollina. The adjacent country, eastward, is very fertile, producing wine, cork, oil, silk, flax, manna, timber, and charcoal. The coast continues, with little variation of feature, to the little towns *Tusa* and *St. Stefano*, the approaches to which are quite free from danger, and may be regulated by the lead.

CARONIA.—At 6 leagues to the eastward of Cefalu, on the summit of a rugged hill, in the skirts of a large forest, is the little town of *Caronia*, protected by a castle. The neighbouring forest is the largest in Sicily, and produces great quantities of oak, elm, pine, and ash, of excellent quality: but many of the finest trees are annually felled only to be converted into charcoal. Eastward of the *Fondaco*, a kind of inn, or rather stable, at Caronia, are several rocks above water, called *i Sorci*, the *Mice*, and a mile to the eastward of them are others called the *Rats*, but all are close in-shore, with a regular approach, carrying 20 fathoms, within a quarter of a mile of the beach, bottom of clay and sand; and thus it continues nearly to Cape Orlando, more than 5 leagues to the north-eastward.

The town and hamlet of *Sta. Agata*, at 7 miles eastward from Caronia, stand on the beach of a level fertile country, excessively afflicted with mal'aria, except in a few places where charcoal is made. Within a short walk of St. Agata (eastward) is the *Rosa Marina Fiumara*, a beautiful torrent, the banks of which are covered with mulberries, oleanders, and myrtles. Near this, on a hill, is the town of *S. Marco*, finely situated, and containing about 2,600 inhabitants. The produce of the country hereabout is honey, corn, wine, and silk.

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* "When small vessels are surprised here, or indeed on any other part of the coast, by fresh winds, and are unable to haul up on the beach, they are anchored and abandoned; for, by an absurd regulation, Sicilian under-writers are not liable to pay any portion of the loss for a vessel stranded, if it appears that a man was on board; as they assert, that a person, under the influence of terror, might cut the cable. When, therefore, bad weather is approaching, they have only to moor with their best ground tackle and repair on shore, leaving the vessel to the mercy of the winds, waves, and saints!"—*Captain Smyth's Memoir*, p. 96.

CAPE

CAPE ORLANDO.—This Cape bears from Cape di Gallo S.E. by E. ¾ E. [*E. ¼ S.*] 22½ leagues: from Cape Zaffarana E.S.E. ½ E. [nearly *East*] 14½ leagues: and from Cefalu E. ¼ S. [*E. by N. ¼ N.*] 32 miles. It is a steep rock, of moderate height, crowned by a ruinous pile called the Castle, but which is, in fact, nothing more than a church and place of interment for people who are wrecked on the rocks below; a catastrophe too frequent, as the place is remarkable for sudden squalls and heavy swells. Off the cape, at a little to the westward of it, is a ledge of rocks, just above water, upon which several vessels have been lost. Between the reef and beach is anchorage for small craft.

On rounding the cape to the eastward, there will appear two small projecting rocks, jutting out like moles, where the small country-boats sometimes lie. In a bight farther on is the village of *S. Gregorio*, a *caricatore*, or privileged place, for timber, with an anchorage against westerly winds, and tolerably protected, except from the north. On proceeding along, the country appears more mountainous, but not less pleasing and fertile. Here the town of *Naso* will be seen, standing on a hill, the site of the antient *Agathyrnum*, in a fine woody neighbourhood, with some store-houses on the sea-shore below it.

At about four miles eastward from Cape Orlando is *Brolo Castle*, a ruinous structure, which stands on a steep cliff in a fertile valley, formed by the meeting of several *fiumare* or defiles. Nearly three-quarters of a mile to the northward of the castle, is a rock, 16 or 17 yards in circumference, and 20 feet above the level of the water, with an intermediate channel, 9 fathoms in depth, but which should not be taken unless in case of necessity, as there is a wash to the westward [*W.S.W.*] from the large rock, and about half-way over to the shore. Here, Captain Smyth says, I have found good riding, even in winter, although it is exposed from N.W. to N.E.; yet the most troublesome winds are those from the southward, as they blow with great violence by the height on which stands the town of *Piraino*. From the Brolo Rock Cape Calava bears E. ½ N. [*N.E. by E. ¾ E.*] 4½ miles, and on the meridian of the eastern sides of the isles Vulcano and Lipari, from the first of which it is distant 10 miles. Nearly half a league to the westward of Cape Calava is the little town called *Giojosa Nueva*, standing at the foot of the mountains, in a very unhealthy situation.

BAY of PATTI, &c.—From Cape Calava to Point Tyndaris the bearing and distance are S.E. ½ E. [*E.S.E. ¼ E.*], 6½ miles. The coast between is the shore of the *Bay of Patti*, within which, in an amphitheatre of fine hills, is the town of that name, containing about 4000 inhabitants. The bay is perfectly safe, with attention to the lead, as it is deep, with regular soundings, and a good bottom of sand and clay: it is only to be noticed that, near the centre, is a large rock above water, with two smaller ones near it, distinguishable at some distance, and, therefore, not dangerous. These are called *Nicolo Rocks:* the channel between them and the beach is perfectly safe, and affords summer anchorage; but it is necessary to sight the anchors every third or fourth day, as the sand is apt to bank; particularly after a breeze.

A fine plain leads from the Marina of Patti to a pass among the hills called the *Scala di Tindari*, on the summit of which are the vestiges of the antient city of Tyndaris. The Scala leads down the hill to the unhealthy village of *Olivieri*, which stands on the banks of the Elicona rivulet.

Point Tyndaris is bold-to, and has a monastery on its summit, by which it may be distinguished at a great distance. A singular little roadstead, on its eastern side, is called *Port Madonna*, and here small vessels lie sheltered from all winds: its circumference is not above half a mile, and its depth, in the middle, 14 feet. A sand-bank extends from it to nearly half a mile in the offing, which ships must avoid by giving it a wide berth, steering well to the eastward.

The BAY of OLIVIERI has excellent anchorage, in from 8 to 30 fathoms, and, therefore, for vessels of every description. By those bound to the westward it may be advantageous, if obliged to bear up from heavy gales; as it may always be fetched, and is, in some degree, sheltered, by the Æolian Islands and the shoal of Madonna, from the strong northerly sea: but it is afflicted with a very unhealthy atmosphere during several months of the year. The best place for mooring, as recommended by Captain Smyth, is in 15 fathoms, stiff clay, about a quarter of a mile off shore, with Point Tyndaris N. by W. ½ W.; the Convent over Port Madonna, N.W. ½ N.; the Baronial Palace of Olivieri, S.W. ¾ W.; the village Falcona S. ½ E.; Milazzo Lighthouse, N.E. by E. ¾ E. The best way of mooring is *true* W.N.W. and E.S.E., with open hawse to the northerly wind and sea. The variation of the compass here, in 1814, was 18° 10½′ W.

From

From Olivieri, north-eastward, a sandy beach extends along a fertile plain, studded with the towns of *Fornari, Barcelona, Pozzo di Gotto,* and several villages, to the back of the city and the promontory of *Milazzo.* The last, which is a mass of granite, two miles in length, nearly north and south, is bold-to, excepting at its N.W. extremity, where there are some steep rocks above water, named the *Porcelli.* At about one-third of a mile eastward of these is a miserable little lighthouse, beyond which, to the eastward and southward, the coast of the promontory is, in general, bold-to. At less than half a mile southward from its N.E. extremity there is, however, off *Point Presso,* a shoal of 3 fathoms: but, at three-quarters of a mile from the same point, in *Paradiso Bay,* anchorage may be found, in from 10 to 14 fathoms, sandy ground.

MILAZZO.—The city of MILAZZO is situated on the southern part of the peninsula or promontory of Milazzo, facing the east, and upon the bay of the same name. It contains about 8000 persons, and is divided into the *Upper* and *Lower Towns,* both of which are irregularly built, and destitute of any remarkable edifices. The people, who appear to be industrious and contented, subsist by the exports of wine, silk, fruit, rags, soap, red and white argols, corn, olive and linseed oils, tunny fish, &c. An enclosed sea-battery, at the south part of the town, is called *Fort St. Elmo.* The citadel is to the N.W. of the Upper Town, and is about 320 feet above the level of the sea: it commands both towns, the port, and the promontory.

The *Pratique or Health Office* is under Fort St. Elmo. The watering-place bears from the shipping in the road about S. ¼ W. [*S. by E.*], and is on a fine sandy beach, where, as the stream separates into several brooks, it is convenient for many boats at a time; the quickest method of filling is by handing buckets.

MILAZZO BAY is spacious and deep, with a firm bottom of mud and blue clay in deep water, and sand near the shores. It is little affected by tides, but the anchorage is greatly injured by the custom of leaving the large stones with which the tunny-nets are secured, and the evil increases annually. The most eligible berth for anchoring is off the Lower Town, and a ship should moor with her best bower to the southward, weighing the anchors at intervals, if remaining long; for the bottom is so adhesive that, if they sink deep, it requires the most powerful efforts to purchase them. In 25 fathoms, stiff mud, and about a quarter of a mile off shore, is the spot recommended by Captain Smyth, with a rock off the N.E. end of the Upper Town, called the Beacon Rock, bearing N.E. ¼ N.; the Castle North; Fort St. Elmo nearly W. by N.; and Cape Rasaculmo E. ¼ S. the last about 14 miles off.

To vessels impeded by the wind, on the passage to the westward, the Bay of Olivieri, already described, is to be preferred, as a place of shelter, to that of Milazzo: because, from the length of the promontory of Milazzo, ships, on rounding the point, are often unable to fetch the proper berth, and have, in consequence, been under the necessity of keeping away for the Faro of Messina.

From the lighthouse of Milazzo to Cape Rasàculmo the bearing and distance are nearly E. by S. [*E. ¼ N.*], 18 miles. Between Milazzo and the cape, the coast forms a deep sandy bay, with several large fiumaras running into it. The banks of the fiumara teem with malaria, but the heights and most convenient spots are covered with towns and villages, of which the most considerable, on the sea-shore, is *Spadaforda,* 6 miles from Milazzo, which is situated amidst beautiful scenery, but is decaying, unhealthy, and dirty. Near this town, or at about 6 miles to the eastward of Milazzo, there is good anchorage for all vessels, keeping an eye to the sea-winds in winter, in from 8 to 25 fathoms, sand and mud; the best place is nearly opposite the Baronial palace, about three-quarters of a mile off shore.

CAPE RASACULMO is a fertile tabled promontory, of moderate height; on its outer point stand the remains of a strong Saracenic tower, and near it a turret with a telegraph, erected by the English during their occupation of the island. There are several sand-hills under the cape, and some low rocks at its base, called *Pietro del Rais.*

At about two miles to the eastward of Cape Rasaculmo are the fiumara and fishing-village called *Acqua Ladrone,* which may be known by a high mound of white sand on the eastern side, called *Arena Bianca.* Off this spot is excellent anchorage, in from 12 to 20 fathoms, fine stiff mud; and the way to bring-to, is to stand in until the beach of Faro Point bears S.E. ¾ S. [*S.E. by E.*], distant 5 or 6 miles, when the best bower may be dropped. A bottom of fine hard sand extends hence, two miles eastward, to the village of Mondello, and

and to upward of three miles in the offing; but opposite to Mondello the ground is broken, with rocky patches, deepening suddenly to 45 fathoms, and then shoaling rapidly toward the Faro Point, but not dangerous to ships under sail.

The CALABRIAN COAST, from *Cape Vaticano to Scylla*, has been already described in page 119, and the low sandy shore of Gioja is therein particularly noticed. To strangers bound to Messina, on passing Milazzo lighthouse, in thick or blowing weather, Captain Smyth has given a special caution, that they may not pass the mouth of the Strait, by mistaking the land, "there being more the appearance of a strait to the southward of Cape Vaticano; and the error has proved fatal to many vessels, as it forms the most dangerous lee-shore in the Mediterranean Sea."*

THE EASTERN COAST OF SICILY, FROM THE FARO POINT TO CAPE PASSARO.

GEODETIC POSITIONS.	Latitude N.				Longitude E.		
MESSINA; Light-house	38°	11′	30″	..	15°	34′	40″
Scaletta; Fort	38	1	45	..	15	27	45
Taormina; telegraph	37	48	15	..	15	17	40
Mount Ætna; the summit	38	43	31	..	15	0	0
Riposto; the prison	37	40	10	..	15	12	50
Aci Reale; Point Tocco	37	34	20	..	15	11	30
CATANIA; the mole	37	28	20	..	15	5	15
Cape Santa Croce	37	15	0	..	15	15	0
Augusta; Lighthouse	37	12	50	..	15	13	15
Syracuse; Lighthouse	37	2	58	..	15	16	50
Cape Moro di Porco	37	0	0	..	15	18	58
Vindicari; tower	36	49	12	..	15	5	20
Passaro Island; redoubt	36	41	30	..	15	8	56
Cape Passaro	36	40	0	..	15	7	30

FARO OR STRAIT OF MESSINA, IN GENERAL.—From Cape Rasaculmo to the Faro Point the bearing and distance are nearly E.S.E. and S.E. ½ E. 8 miles; and, from the Faro Point to the Rocks of Scylla, (already described on page 120,) S.E. by E. ½ E. [*E. by S.*], 3023 fathoms.

The FARO POINT is low and sandy. On its eastern extremity is the lighthouse, constructed 200 years ago, on the ruins of an antient tower, and which is strongly fortified. On the point are also two sea-batteries and two martello towers, the whole of which are commanded by the Telegraph Redoubt, which stands on a hill at nearly a mile and a half westward from the lighthouse. The village of Faro is a quarter of a mile south-westward from the lighthouse; it is small and dirty, but the country about is very picturesque, and produces the rough wine, like the *Falerian*, formerly celebrated under the name of *Mamertium*. Between the beach and the hills, on the East and South, are two large sheets of water, united by a canal, which are named, from their figure, the Round and Long Lakes, and in which are the best eels and cockles in Sicily.

The CURRENTS of the Strait of Messina have been frequently noticed, both by the antients and moderns. It has been said that, "they are governed by the moon; and, although there is neither rise nor fall of the tide produced by them, yet that which runs to the northward is called the flood, and that which runs to the southward, the ebb: it flows, on the full and change of the moon, till 9 o'clock. The mid-channel currents run a little more than six hours each way, subject, however, to the influence of the winds, which often accelerate, or retard, them an hour, or even two: and it is to be observed, that, when the flood-tide is running, there is always a strong eddy, running in an opposite direction, to the southward, near both shores; and, when the ebb-tide is running, the eddy runs to the northward: the currents, in the narrowest part of the strait, run at the rate of 6 to 8 knots."

* In the delightful series of Views, which illustrate Captain Smyth's Atlas of Sicily, &c., there is one (on Plate 10) of the Faro Point and coast to the eastward, intended to prevent this error. "There are two tabled tongues of land, resembling each other, to the southward of the bight of Vaticano, and it is between the two that the entrance of the Faro of Messina will be found."

Upon this subject Captain Smyth has said, "The currents in the Faro are so numerous, and so varied, with respect to their duration and direction, that I found it very difficult to ascertain any thing with precision, as one series of observations seldom agreed with another; but I have generally found the statements of the most experienced pilots, after making due allowance for localities and weather, approximate very near to each other. In settled seasons there is a central stream, running north and south, at the rate of from two to five miles an hour; and which, though, properly speaking, only a current, when uninfluenced by strong winds, is governed by the moon. On each shore there is a counter, or returning, set, at uncertain distances from the beach, often forming eddies to the central current; but, in very fresh breezes, the lateral tides are scarcely perceptible, while the main one increases, so as to send, at intervals, slight whirlpools to each shore. There is, in general, an uncertain rise and fall of a few inches; but, before the vernal equinox, when the sun is nearest the earth, and the moon in her perigee, they rise to 18 or 20 inches. When the main current runs to the northward, it is called the ascending or flood; and the contrary the descending or ebb. There is usually an interval of from about 15 to 60 minutes between the changes, and the tide runs six hours each way; though I have known it, during a S.E. gale, (which has the greatest influence,) flow to the northward upward of eight hours. By the most precise observations I have been able to make, it is high-water, on the days of full and change of the moon, off the Faro Point, at 6 *h.* 56 *m.*, and in the harbour of Messina at 8 *h.* 10 *m.*"

A bank extends about a quarter of a mile from the Faro Point to the eastward, having on it from 7 to 30 fathoms of water, and affording tolerable anchorage for ships that wait for a passage either to the southward or westward, in a situation preferable to that off Acque Ladrone, more to the west, as there a vessel is liable to be caught by sea-winds, when, although she may ride easily, it will be difficult to weigh and gain the strait. In order to obtain a berth here, you should stand on the bank by the lead until the light-house bears nearly N.W. by W. [*W. by N.* ½ *N.*] 350 or 400 fathoms distant, where you will find about 15 fathoms, with sand. It is to be noticed that, at about a quarter of a mile to the north-eastward is a foul spot, which may damage cables. The best bearings, as given by Captain Smyth, are Cape Vaticano N.E. ½ N. [*N.N.E.*]; a convent over the town of Palma, E. ¾ N. [*N.E. by E.* ½ *E.*]; Scylla Castle, S.E. by E. ½ E. [*E. by S.*]; and the city of Messina, S.W. by W. ¾ W. [*S.W.*] This place, however, is exposed to the whole strength of the winds and currents, and therefore to be considered only as a stopping-place under favorable circumstances.

The eastern side of the Faro, noticing the phenomenon called the *Fata Morgana,* has been described on our preceding pages. The opposite or Sicilian coast has scarcely a hidden danger. It is generally bold-to, and so clean, that the largest vessels may approach it by the lead, as near as can be requisite. The tides and currents are, of course, affected by those of the Faro, and heavy gales cause a strong northerly or southerly set, which must be particularly allowed for, in shaping a course. In mid-channel of the strait, no bottom is to found with a line of 200 fathoms.

Between the Faro Point and the Port of Messina, a distance of 6 miles, are several excellent sandy bays, affording eligible shelter for shipping in general; more particularly off the fishing-village of *S. Agata,* at 2½ miles from the Faro Point; and off the *Grotta,* having a church with a dome, at a mile more to the S.W. There is, likewise, anchorage at a mile farther, off *Paradiso,* a beautiful spot, two miles northward of Messina; but here are some foul patches.

On both sides of the Channel, pure, though rather hard, fresh water may be procured, by digging a hole in the sand, within two or three feet of the margin of the sea.

The FARO CHANNEL is entered on passing the lighthouse, and has always been used, as an expeditious route, by skilful mariners, bound to the south-eastward. From the baffling winds to be expected, caution is, however, requisite, and the safest way is to keep over toward the Sicilian shore, as the current frequently sets toward the rocks under the *Torre di Cavallo,* between Scylla and Point Pezzo, on the eastern coast: but, even on this side, the beaches are so steep that the stream enables vessels to glide safely along them. In light breezes, the current may, at times, be stronger than the ship's effort, and may turn her round, but no actual danger need be apprehended.

No stranger should attempt to push through in the night, unless with a fine free wind: and, it is to be observed that, the light of Messina cannot always be distinguished from those of the fishermen, who, in every tranquil night cover the strait with their boats.

Precautions

Precautions are, likewise, to be taken against the heavy gusts which, at times, issue from the defiles *(fiumare)* of the mountainous coast, and upset small vessels.

MESSINA.—The port of Messina is a large basin, of a circular form, most eligibly situated for commerce, and one of the most beautiful, commodious, and safe, that can be imagined.* It is open on the N.W., the entrance being 500 yards wide, and is inclosed on the N.E., East, and South, by a low sandy tongue of land, in form of a crescent, and called the *Braccio di St. Rainiere.* On the north end of the latter is *Fort Salvador,* a long irregular structure, which flanks the entrance; to the S.E. of this are the Flotilla-arsenal and Lazaretto: eastward of the latter, on the back of the Braccio, is the greater lighthouse, square, and surrounded by a fort. On the south side of the harbour is the Citadel; next to which, on the S.W. side, is the great Arsenal, and all along the west side is the *Marina,* or Strand, and city of Messina. The entrance is defended on the west side by *Porta Reale,* which is 700 yards without the harbour.

The MARINA is an excellent wharf, which extends more than a mile; and it always presents an active scene, exhibiting the merchant-ships of all nations, with their bowsprits over the kay, and the operations of shipping and discharging, which are here most conveniently performed. A statue of Neptune ornaments it. The pratique office, the fish-market, and the custom-house, are all on the Marina; and parallel to it are the ruins of some magnificent buildings, in which are eleven arched gateways, leading to as many different streets.

MESSINA is delightfully situated at the foot of the mountains, and contains a population of about 73,000 individuals. It is regularly built, well paved with square blocks of lava, and several of the streets are wide and handsome, containing numerous churches, convents, and capacious edifices, ornamented with statues and fountains. But in various places, particularly about the Marina, the ravages of the disastrous earthquake of 1783, which shook Sicily to its foundation, are yet visible, and earthquakes have been frequent here. An old irregular wall surrounds the city, and above it are two strong forts, *Gonzaga* and *Castellaccio.* The hills behind the city are beautifully picturesque and well cultivated. The houses are mostly of white stone, and present a pleasing aspect. The most regular are those of the Marina.

Messina carries on a great trade in silks, oil, corn, wine, and fruit; but chiefly in foreign cottons. Provisions in any quantity may be purchased for the supply of a fleet, at reasonable prices; but fruit, vegetables, and other refreshments, are cheap.

Ships entering the port require no pilot, though many employ one, in order to have the assistance of their boats, for carrying a hawser to the shore or wharf, which is necessary on coming in, when the tide runs very strong. Most ships moor with a cable to the eastward, in about 20 fathoms, and a hawser fast to the shore, as there are stone posts for that purpose, at regular spaces on the wharf.

The best mode of anchoring in the harbour, is to run close in, off the Marina, with a warp ready for a stern fast, then drop anchor in about 30 fathoms, and secure to the shore immediately. A ship can moor, if she prefers it, in the central part of the harbour, with her best bower to the N.E. and the small one S.W., having an open hawse to the N.W., as heavy squalls rush down the hills in that quarter; but, as the western anchor, from the steep nature of the bottom, is liable to be brought home, and the ship would quickly tail, mooring thus is not so adviseable as with fasts on the kay. To commanders of the Navy, who prefer lying at their own anchors, the following berth is recommended.

Best bower in 31 fathoms; small bower in 23 fathoms; ship in 35 fathoms, with the citadel flag-staff S. by E. ½ E. [*S.E. by S.*]; Castle Gonzaga, (on the hill behind the town,) W. ½ S. [*W.S.W.*]; Tower of Cœur de Lion, Mata Griffone, N.W. ¾ W. [*W.N.W.* ½ *W.*]; Pórta Reale Bastion, (without the harbour,) N.N.W. ¾ W. [*N.W.* ½ *W.*]; the Lighthouse E.S.E. ½ E. [*E.* ¼ *N.*]

It is to be noticed that, in the N.E. quarter of the harbour, between Fort Salvador and the Lazaret, is a patch of ground made foul by the wrecks of two old Spanish line-of-battle ships, which were burnt and sunk here by order of Admiral Byng.†

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* A very fine view of it is given in Captain Smyth's Atlas.

† Captain Smyth incidentally remarks, that the *terredo navalis,* or ship-worm, commits great ravages in this port.

For

For vessels intending to make but a short stay, there is a good berth, in which they may bring up, at two-thirds of a mile to the northward of the harbour, off the convent of *St. Francisco di Paolo;* it insures an offing for standing either northward or southward; is well sheltered, and has excellent ground: but between it and Fort Salvador is a broken, foul bottom, in from 20 to 30 fathoms, which must be cautiously avoided, as very injurious to cables.

Water is obtained from a fountain on the wharf. Ships in quarantine get theirs from a well at the *Sanita*, which is to the northward of the town, or at the Lazaret.

CHARYBDIS.—The celebrated vortex, named the *Galofaro*, more known by the antient name *Charybdis*, is formed at the back of *Braccio di St. Raniere*, or tongue of land forming the harbour of Messina. By the antients, this whirlpool was said to swallow up ships, and upon the return of the tide to throw them up again in broken pieces. Captain Smyth describes it as an agitated water, from 70 to 90 fathoms in depth, circling in quick eddies, which seemed to be caused by the meeting of the harbour and lateral currents with the main current; the latter being forced over in this direction by the opposite point of *Pezzo*. The danger of Charybdis is proverbial, and at the present day small craft are, at times, endangered by it, and ships of war whirled round upon its surface; but, with caution, very little danger or inconvenience is to be apprehended from it.

This whirlpool appears at about a cable's length from shore, in the middle of a bay formed by the Tangdora Points and Shoals. The last are two shelves stretching from the shore about the Great and Little Lights, and having over them from 2 to 15 fathoms. Those leaving the harbour of Messina, and bound to the southward, must be cautious, that the strength of the current may not set them on the shoals, as the sand, being full of bituminous particles, is nearly as hard as rock, and if a vessel grounds here, the rapidity of the stream and great depth of water outside, are impediments to getting off again. To prevent such accidents, a *small light* has been established, under the recommendation of Captain Smyth, between the greater lighthouse and Fort Salvador, nearly on the meridian of the former; so that the high light, in a line with or open to the westward of the lower one, will always be a guide on approaching the harbour.

SCALETTA, &c.—In a healthy situation, at the distance of 10 miles S.W. ½ S. [*nearly S.S.W.*] from Messina, are the villages of Scaletta, with about 700 inhabitants. To the southward of these a fine plain extends, from the declivity of the mountains to the beach. The country is fine and fruitful, but the summits of the hills are destitute of wood. The coast presents a series of villages, gardens, and vineyards, whence Messina is supplied with vegetables, wine, oil, and fruit. The intervening towns flourish, from the good quality of their raw silk.

At Scaletta, the beach is broken by a rocky point, with an old watch-tower on it, and the place is fortified for the defence of the pass, this being the principal road to Messina from the stations along the eastern coast.

The shore southward of Messina is a steep sandy beach, having, within the distance of a cable's length, from 30 to 50 fathoms of water, and it has only three spots which afford temporary anchorage.

CAPE GROSSO, a bluff headland, with rocks at its base, lies at the distance of a league to the south-eastward of Scaletta. On the opposite coast of Calabria, 3½ leagues distant, is *Cape del Armi*, distinguished by two turrets, and appearing directly under the hill of *Pentadatilo*. The latter derives its name from its having five crags on an insulated base: it bears a great resemblance to a human hand, and has a castle half way up. The line between the Capes Grosso and Del Armi is considered as the end of the Faro Channel, but the influence of the current is felt considerably more to the southward. The antient town of ALI is situated just within Cape Grosso, on a declivity of *Mount Scuderi;* it is celebrated for it mineral-waters, and for the constant wind, blowing with some violence out of a cavern near its tabled summit.

POINT ST. ALESSIO is 8 miles to the S.W. ¼ W. [*S.W. by S.*] from Cape Grosso. This is an abrupt bold cliff, with several rocks under it, where coasting-craft occasionally anchor, although the water is shallow and the sea fetches in. The shore between forms a steep bold beach, and presents several towns and villages, of which the first is that of the *Fiume di Nisi*, romantically situated under an antient castle. There are rich mines in the vicinity. Point St. Alessio has a tower, a barbican, and a telegraph-post; above it is the town of Forza, with a respectable castle, but frequently afflicted with mal'aria.

TAORMINA.—*Cape St. Andrea*, the antient promontory of *Taurus*, is 5 miles to the southward of Point St. Alessio. This cape forms the north side of the Bay of Taormina, as *Point Schisò* forms the south. Northward of Cape S. Andrea are several romantic little coves, with many curious rocks of coarse red marble, perforated with large caverns, the resort of innumerable wild pigeons.

The entrance of the Bay of Taormina is about half a league in breadth. The town [antient *Tauromenium*] appears over its north side, in the midst of romantic and matchless scenery; yet it is poor and dirty, with an immoderate proportion of convents and large buildings. It contains about 3,500 people, not in the best health. Above it, on the summit of the tabled cliff, is the wretched town of *Mola*, with about 400 inhabitants.

On the right or south bank of a rivulet, in the middle of the bay, is the unhealthy village *Giardini*, which has a better inn than the town above it. On the beach of Giardini is the statue of a bishop, and beyond this, with several turrets on it, is *Point Schisò*, with its ground of lava, &c. Here stood the antient city of *Naxos*, the earliest of the Grecian settlements, now overwhelmed with lava, gardens, and vineyards.

In the Bay of Taormina tolerable anchorage is afforded in from 8 to 30 fathoms, on a fine sandy bottom, near the shore, with mud farther out; but it is exposed to all easterly winds, excepting close up with either of the points, and therefore only to be taken in a case of necessity, when a central berth will be the best.

At half a league to the south-westward from Point Schisò, the river Alcantara falls into the sea: this is one of the most considerable streams in Sicily. Between this river and *Point Alcorati*, a distance of 7 miles, is comprised the district of *Mascali*, which is exuberantly fertile, and annually produces 90,000 pipes of wine. Near Alcorati are the flourishing villages of *Riposto* and *Giarre:* the ground here is unfit for anchorage. At two miles south-westward from Point Schisò is a loading-place, called *Casa Cottone*, where timber and grain are embarked.

POINT TOCCO and ACI REALE.—At 5 miles southward from Point Alcorati is *Point Tocco*, a precipitous mass of basaltic lava, converted into a mole, and forming a small port called the *Marina of Aci*. The town of *Aci Reale* is westward of this, and stands on extensive streams of lava, in a healthy and fertile situation. It is a clean and regular town, containing about 14,000 inhabitants, with many churches, &c.

CAPE MOLINO, another remarkable promontory of lava, is 2½ miles to the southward of Point Tocco. Beyond the cape, on the S.W., is the little *Bay of Trezza*, on the north side of which is the unhealthy village of *Sta. Anna*, and more to the southward the loading-place of *La Trezza*, a small town built entirely of lava, the very dark hue of which, contrasted with the white-washed lintels and door-posts of the houses, has a singular appearance. It contains about 800 inhabitants. On the south side of the bay are the remarkable rocks called the *Cyclops*, which have a bold and singular appearance. The basalts that form them are mostly vertical, and consist of prisms, of from four to eight sides. The bay affords tolerable anchorage, in from 12 to 7 fathoms, fine black sandy bottom, except near the rocks and off Trezza, where there are some foul patches.

CATANIA.—From Point Molino to *Point Armisi*, the outer point of the Bay of Catania, the distance is 5½ miles S.W. by W. ¾ W. [*S. W.*] At about a mile and a half south-westward of the Cyclops, is the little town of *Aci Castello*, with its castle on an enormous cliff of lava, rising vertically from the sea, and containing about 700 inhabitants. This place, though very finely situated, is irregular and dirty.

From *Aci Castello* to *L'Ognaro*, a distance of more than half a league, the coast is black, rocky, and indented with numerous caverns. L'Ognaro is seated on a cove, from which a great quantity of squared lava is annually exported for building and paving; all the coast hereabout being bounded by the dreary lavas of Ætna. The general depth in the cove is from 7 to 3 fathoms, but the bottom, in patches, is foul, and requires chain-cables.

CATANIA is at present the second city of Sicily, and its polished and literary societies render it highly respectable. This place has been dreadfully ravaged, at different times, by wars, earthquakes, and volcanic eruptions. Many vestiges prove it to have been antiently very elegant and extensive.

The city has a noble appearance from sea, which is not diminished on landing. Its streets are regular, spacious, and handsome. Its numerous churches and public buildings are

are magnificent: they are mostly constructed of lava, faced with magnesian limestone, and enriched with marble.

The memorable earthquake of 1693, in which 50,000 inhabitants perished, so nearly destroyed the whole of the city, that the little remaining was taken down, in order to carry the new plans into effect, so as to have wide streets and numerous squares, as best adapted for a place subject to such awful convulsions of nature. This city is the residence of many of the Sicilian aristocracy. Its present population amounts to 74,000. All ranks have, in general, a better and more cheerful appearance than in the other Sicilian cities: their domestic and social intercourse is less corrupted, and their easy manners are extremely pleasing to strangers. The environs of the city, excepting those parts overrun by lava, are fertile and well cultivated, but have a black and repulsive appearance.

The port of Catania is generally filled with small craft, which come hither for corn, maccaroni, potatoes, olives, figs, silk, wine, almonds, cheese, oil, soda, manna, cantharides, amber, snow, and lava: its commerce merits a superior harbour. Point Armisi forms the north side of the port, between it and the *Sciarra* Point, on the south side of the town, all vessels may bring up, on occasion, in from 7 to 12 fathoms, watching the wind: but the bottom is rocky. The small or inner port is formed by a stream of lava to the south, and two short piers to the north: its greatest depth is 3½ fathoms; and this does not extend far.

The GREAT BAY, or GULF of CATANIA, extends from La Trezza to Cape Santa Croce, a distance of 7½ miles. Its ground is generally clean, and ships may anchor in any part during the fine season, by picking out a berth with the lead. The central part of this bay is formed by the sandy beach of the extensive plain to the southward of Catania, which extends nearly 10 miles, and which is bisected by the *River Giaffretta*, the antient *Simæthus*, one of the largest in Sicily.

MOUNT ÆTNA.—The coast which we have latterly described may be considered as the eastern terminating line of Mount Ætna, of which the extensive base is 87 miles in circumference, and its summit, as already noticed, 10,874 feet above the level of the sea. This summit is 14½ miles northward from Catania, and its situation is, latitude 37° 43′ 31″, longitude 15° 0′. The radius of vision is about 150 miles, and the angle of inclination of the visible horizon with the true 1° 43′ 6″. The mountain is divided by nature into three distinct parts, or zones: the *fertile*, the *woody*, and the *desert*; each materially differing from the other in aspect, climate, and produce, as may be inferred from these distinctions. The first region is well cultivated and thickly inhabited: the woody region is an extensive forest, six or seven miles in breadth, which affords abundant pasturage to numerous flocks and herds: the desert region is a melancholy waste of black lava, scoria, and ashes, in the centre of which is the crater. Captain Smyth thinks that this volcano was more intense and active, in antient times, than it has been in more recent periods; the matter being not only more abundant, but pumices and vitrifications were numerous; whereas, latterly, no such substances have been ejected.

AGNUNI, &c.—At the south end of the Plain of Catania, and at 10 miles to the southward of the city, is the *caricatore*, or loading-place, of *Agnuni*, a village whence corn, oil, and rice, are exported. The air is here unwholesome, during great part of the year.

LA BRUCA.—At 4 miles S.E. ½ E. [*E.S.E.* ½ *E.*] from Agnuni is the little port of *La Bruca*, containing a small village on a tongue of rock, with about 160 poor inhabitants. It has a stout square castle, with round towers at its extremity. The harbour appears like a work of art, rather than of nature, as the rocks here rise vertically 40 or 50 feet, and contain several grottoes. Small craft resort hither for wheat, tunny, and squared stones for building, and fine oysters are taken here. Regular soundings may be found on approaching, and near the castle are 2½ fathoms. The steepest shore is on the west. At a mile eastward from the port is the headland named *Point Cornala*. From the latter to *Cape Santa Croce*, the bearing and distance are S. by E. [*S.S.E.* ¾ *E.*], 3 miles. The cape is pretty bold, but has a few rocks and a tailing reef without it. Upon it is the small convent of St. Helena. The promontory of Santa Croce terminates at *Point Grosso Longa*, which is at three-quarters of a mile southward of the cape, as above stated.

AUGUSTA.—The city of AUGUSTA stands on a small peninsula half a league to the westward of Point Grosso Longa; the coast between forming the bay called *Porto Safonica*, of which the inner part is shoal and rocky. At one-third of a mile from the south

south end of the peninsula is the *Torre d'Avola*, a well-built insulated fort, on which is a lighthouse, in which a miserable light is exhibited. The shoal ground extends three-quarters of a mile to the southward of this tower, and thence borders all the bay to the isle *Magnisi*, by which it is terminated on the south. The *Hybla Shoal* lies nearly in the middle of the entrance, one mile and a quarter to the northward of Magnisi: this is a dangerous reef of hard rock, with from 3¼ to 5 fathoms over it, and having near it a depth of 8 to 10 fathoms, gravel bottom.

The town of Augusta is large, strong, and well fortified; the streets regular and parallel; but the houses are low and mean, and the inhabitants, amounting to nearly 8000, have an air of dejection and poverty. They subsist by the export of salt, made in salines north and west of the town, and of a little oil and wine. With their poverty they seem to unite a degree of ferocity, which degrades them below the general rank of Sicilians.

The principal fortress is situated on the isthmus that unites the town with the main, both of which it commands. The town is surrounded, toward the sea, by a glacis or covert-way, in front of which is an artificial cordon of rocks, in the water, to prevent the approach of boats.

The mole and the pratique-office are between the town and citadel. The landing-place for boats is under the line-wall, near the middle of the cordon, or rocks, above-mentioned.

The western sides of the harbour and bay are watered by several streams, in which fine eels, mullet, and barbel are caught. On the range of hills which bound the plain on the west, the inhabitants still collect excellent honey, with which they carry on a profitable traffic. The promontory of Magnisi, on the south, is connected to the main by a sandy isthmus, or causey, and is of moderate height. At the inner end of the causey are the extensive salt-works of Sajona and the plain of Aguglia. On Magnisi, opposite to the causey, is a martello-tower, which completely commands the island. This isle forms two small bays, having sandy bottom, with good anchorage for coasters, in from 4 to 9 fathoms.

Ships standing in for Augusta may pass the promontory of Santa Croce, at a convenient distance, only observing to clear some rocks which lie at the foot of Point Grosso Longa; thence steer about S.W. by S. until nearly three-quarters of a mile to the southward of the lighthouse, and never shoalen to less than 12 fathoms in that distance. When the light-house and the cathedral, (the highest edifice in the town,) are in one, you may gradually haul up to the N.W. and North, passing the light at about half a mile, and take up a berth abreast of the town, in from 8 to 11 fathoms, clay bottom. You may run farther up, beyond the forts, and anchor in from 6 to 8 fathoms, but the air is not so wholesome as at the lower anchorage.

Captain Smyth gives the following bearings for mooring in, with the anchors true North and South, in 10 fathoms, stiff clay, near half a mile from the town. The citadel N.N.E. ½ E. [*N.E.*]: the Lighthouse S.E. ½ S. [*S.E. by E.*]: Magnisi tower S. ½ E. [*S.S.E.*]: Vittoria fort N. by W. ½ W. [*N.W. by N.*]

On coming in, care must be taken not to run on the Hybla shoal, which lies as above described, with the lighthouse a little open to the eastward of the cathedral. Large ships to avoid it, on coming from the southward, should keep toward Cape Sta. Croce until the lighthouse bears N.W. ½ N. [*N.W. by W.*] about two miles, and then stand in toward the anchorage: or, they may enter by the S.W. channel, between the reef and Magnisi: giving the latter a berth of three-quarters of a mile, and borrowing over toward the main until the cathedral is well open to the westward of the lighthouse; for, by keeping it open thus there is plenty of room to beat.

With easterly and southerly gales, there is often a great swell in the bay, which causes those lying farthest out to ride heavily. The ground is good, but it is requisite frequently to sight the anchor, which may otherwise require an immense purchase for weighing.

PANAGIA BAY.—From the S.E. point of Magnisi Cape Panagia bears S. by E. ½ E. [*S.E. by S.*] 3 miles: the coast between forms the Bay of Panagia, the bottom of which is sandy. In its southern part is a rocky creek, with a large *tonnara*, or tunny-fishery. From Cape Panagia to the entrance of the harbour of Syracuse the bearing is true South, distance, 4 miles. The coast between is composed of rocky cliffs, with numerous caves, and is generally bold-to: there are here, however, several remarkable rocks, of which the first is a perforated rock, near shore, at very nearly half-way between: and, at three-quarters of a mile to the southward of this is a cluster called the *Capuchins*. The last are nearly

nearly half a mile to the northward of Syracuse, and between them and the town is a small shallow bay, named *Porto Piccolo*; the antient *Portus Marmoreus*, in which the ground is rocky. More to the southward, off the middle of the town, at a cable's length is *Lo Scoglio del Cane*, or the Dog's Rock, which is low, and has within it a passage of 3½ fathoms.

SYRACUSE, the antient capital of Sicily, was founded by a colony from Corinth, and gradually increased until, at the acme of its prosperity, the circuit of its walls amounted to more than 20 miles, and the number of its inhabitants to more than half a million. The modern city, connected to the main by a bridge, &c., contains about 13,000 inhabitants. In the dreadful earthquake of the 11th January, 1693, one-fourth of the inhabitants perished under the ruins of their houses.

The city constitutes a fortress of considerable strength, and the entrance of the harbour, which is half a mile broad, is commanded by a fort on the point south of the town, called *Maniace Castle*, on which is a lighthouse. The streets are confined and narrow, and the public buildings, though numerous, have nothing to recommend them to notice. The natives, in general, are kind and hospitable to strangers. The adjacent country, being copiously irrigated, and possessing a fine marly soil, is exuberantly fertile, producing wheat, oil, hemp, tobacco, fruit, pulse, and several kinds of delicious wines; but, from the marshes of the alluvial plains on the west, pernicious miasmata have frequently arisen, and occasioned the destruction of besiegers. The river is itself much contaminated, and its current impeded, by the injurious custom of steeping hemp in it during the summer.

The southern side of the harbour of Syracuse was the promontory of Plemmyrium, and some shoals which lie off its northern part are still called the *Plemmyrium Shoals*. These stretch about one-third over the entrance from the southward, and the least water on them, as stated by Captain Smyth, is 3½ fathoms, with 7 between them and the land.

When, on entering the harbour, the ship is just clear of the lighthouse, the two broken columns of Jupiter Olympius, on the west of the harbour, will be seen; with these two in one, bearing W. by N. ¼ N. you will pass close inside the point, and give the shoals a wide berth, in a channel of from 9 to 15 fathoms. If standing in at night, from the northward, when the light bears W.N.W. ½ W. [*West a little southerly*] by keeping W. ½ S. [*W.S.W.*] you gain a clear channel close to Maniace or the Lighthouse Point. If coming in from the southward, keep the light on the larboard bow, and when it bears to the westward of N.N.W. ½ W. [*N.W.*] you may stand on safely. In either case, good anchorage may be found to the northward, abreast of the town; but, from the facility of getting out with light winds, the situation between the town and the salt-works, in from 5 to 9 fathoms, fine black mud, is to be preferred. The N.W. part of the harbour, owing to the floods of the Anapus, and the marshes, is the shoalest.*

As the S.W. winds, which come over the Valley of the Maddalena, lying in that direction, are the most violent, while the East and S.E. send in the greatest swell, those who intend to make any stay in winter, should moor with the best bower to S.W., the small one N.E. and an open hawse to the mouth of the harbour. Here, in 6½ fathoms, clay, off shore nearly half a mile, the bearings are as follow:

The Cathedral† E.N.E. ½ E. [*N.E. by E.*]: the Lighthouse S.E. rather easterly [*E.S.E. ½ E.*]: Massa Point, the S.E. point of the harbour, S.S.E. ½ E. [*S.E.*]: Columns of Jupiter Olympius W. by N. [*W. ½ S.*]: Mouth of the Aqueduct, to the N.W. of the town, N. by E. ¼ E. [*N. ¼ W.*]

From the best anchorage generally, in the northern part of the harbour, the lighthouse point bears from S.E. to S.E. by S. and the city gates from E. by N. to E.N.E.; depth about 5 fathoms, soft muddy bottom. The tide here is generally imperceptible, but there is a little rise and fall occasioned by the winds.

Wood may be purchased cheaply, and water may be obtained at different places. The best is on the north side of the harbour, from a fine run brought down by the aqueduct. The casks may be filled in the boats with a long hose. In case of emergency, with a fleet, water may be obtained from the River Anapus, on the west side of the harbour; here the

* At about 320 yards to the eastward of the landing-place and opposite the Marina, there may probably remain, in 2¾ fathoms, the hull of a vessel which sunk several years ago, and which became embedded there.

† Near the middle of the town; antient *Temple of Minerva*.

water

water may not be so pure, and it will be necessary either to raft the full casks off, or rig a triangle to hoist them into the boats, and the water is too shoal off the mouth of the river to get boats in close enough to fill the casks in them.

Fresh beef, vegetables, and Sicilian wines, may be had here at reasonable prices.

SYRACUSE to CAPE PASSARO.—The southern promontory of the land of Syracuse terminates to the southward by the cape called *Morro di Porco*, which is nearly a league from the entrance of the harbour. A vessel bound to the southward may sail close to the cliff of the cape, or within a cable's length in 15 or 20 fathoms: after which Cape Passaro, appearing like an island, will soon be seen.

At about 3 miles to the south-westward of Morro di Porco is the little port of LOGNINI, formed by a large rock connected to the main by a reef on the north shore. The coast between these places forms a fine bay, with sandy coves, where ships may be sheltered from W.N.W. by the North to E.N.E. (by compass) in 12 and 13 fathoms, sand and mud.

Finely situated on a woody eminence, 7 miles to the south-westward of Lognini, is the town of AVOLA, containing about 7000 inhabitants. It has a Marina, or dependent village on the beach, a tonnara, a battery, several respectable edifices, a good market-place, and an air of cleanliness and regularity. Besides the profits of the tonnara (fishery) Avola has a considerable traffic in wine, corn, cheese, caroubas, almonds, oil, honey, and fruit, and some in sugar, made from the only cane plantation now on the island. The adjacent country abounds with game, and supplies pasturage to a great number of fine cattle, many of which are exported to Malta. At between two and three miles south from the Marina are moored the nets for catching the tunnies, and here a vessel is generally at anchor, with a hut built on her as a beacon.

NOTO, the antient *Neetum*, a city of 13,000 inhabitants, stands 4 miles inland, south-westward, from Avola. It is charmingly situated, and is one of the most elegant and respectable towns in Sicily, but the air is very unhealthy. The River Abysso winds through the plain below, and upon the surrounding lands luxuriantly abound the walnut, olive, almond, and fig trees, with vines, intermixed with myrtles, jessamines, roses, and numerous aromatic shrubs; but misery and disease are in attendance, and the few natives who dwell here are poor and feeble.

At 4 miles more to the southward is VINDICARI, a small port and caricatore, or loading place, near the sandy marshes of Rovilta. It is defended by a tower of four guns. Refreshments may be procured here, but not with facility. At 3½ miles southward from this place is MARZAMEMI, a small and dirty fishing village, inhabited by an industrious people, who possess one of the most profitable tonnaras in Sicily. The coast from Marzamemi to the southward, presents a barren desolate appearance, and seems to be nearly deserted: but on a hill to the south-westward of it is the new town of PACHINO, with its church and windmill, which are very conspicuous from a considerable distance.

At a league and a half to the southward from Marzamemi is the island of PASSARO, bearing an arid and deserted appearance, but where there is another large tonnara, employing about 300 people. The isle is composed of a singular accumulation of marble, lava, tufa, cinders, and oceanic deposits; it is high on all sides but the west, where it is connected to the main by a sandy spit, having over it two feet of water. On the eastern point is a tower redoubt for twelve guns, garrisoned by seventy-five soldiers.

Between Avola and Passaro the coast affords good shelter, both to ships and small craft that are obliged to bear up in the channel of Malta, from a westerly gale; the berth may be taken by the lead, in from 9 to 30 fathoms, sand in shore, and stiff clay in the offing. Caution must be taken when rounding the point under the tower of Passaro, in order to keep clear of the tunny nets, which are moored thence to the tonnara, in the fishing season.

Half a league south-westward of Passaro Isle is *Cape Passaro*, a low rocky point, forming the east side of a cove called *Porto Paolo*. At a short distance inland is a little village newly settled, for the improvement of the adjacent plains. The coast hereabout has otherwise a desolate and melancholy appearance.

Having now described the northern and eastern coasts, we begin again with the N.W. and proceed thence, southward and eastward, from Cape St. Vito, with which the preceding description commenced.

THE ÆGADEAN ISLANDS, &c. OF THE WESTERN COAST, WITH PANTELLARIA.

GEODETIC POSITIONS.	Latitude N.	Longitude E.
Maritimo; the castle	38° 1′ 10″	12° 3′ 55″
Favignana; castle	37 56 36	12 17 45
Levanso; guard-house	38 1 38	12 20 29
Pantellaria; prison fort	36 51 15	11 54 29

It was not until after the publication of the Surveys of Captain Smyth that we knew of any fair representation either of the *Ægadean* or of the *Æolian Islands;* and, upon reference to *any* former maps or charts, it will be seen, on comparison, how very erroneously all these isles were represented, as well as the neighbouring coasts. Moreover, the great Bank, between Sicily and Africa, with the soundings on and about the same, were totally unknown, with the exception only of the *Skerki Rocks* and *Keith's Reef*, which will be described with the African coast hereafter. For the great Bank, (lately distinguished by the name of Captain Smyth's ship, the *Adventure*,) the reader is referred to the chart. The islands we shall now take in geographic order, commencing with *Maritimo*, as the most convenient arrangement for British commanders, bound to the eastward.

The ÆGADEAN ISLES, or ÆGADES of the antients, consist of *Maritimo*, *Favignana*, *Levanso*, and *Formiche*. Of these the westernmost is Maritimo, well known as an important landfall and point of departure, situated at the distance of 7 leagues from the nearest land of Sicily, which is that near the city of *Trapani*. The island is high and about 7 miles in circuit; its west side is inaccessibly rugged and steep, but the east coast is lower, and has a small straggling village, with fifty or sixty people, who cultivate the arable part, collect a quantity of fine honey, and export fagots to Trapani. Near the village, which is named *San Simone*, there is good landing in westerly winds, and excellent fresh water may be obtained here; but the fishermen take shelter in a small cove, *Cala Bianca*, under the N.W. point of the isle, and in which there are 6 fathoms of water.

Off the N.E. end is a high steep rock, connected to the island by an isthmus, and on its summit is a castle, which defends the anchorage beneath. This castle is garrisoned by about forty invalids, and is often used as a state prison; it is also the residence of a Sicilian Colonel, who is governor of the island.

Ships from the westward, and bound to Palermo, after making Maritimo, should keep Cape St. Vito on the larboard bow: for, as this land is high and conical (*see page* 131) it cannot be mistaken. They will thus clear the island Levanso, the rocks called the *Porcelli*, and *Cofano Bay*, all of which lie to the southward of this route. This is especially to be observed with a northerly wind and carrying current.

If bound to Trapani, having made Maritimo, stand close by the north point of the isle Levanso, which is perfectly bold, and thence steer nearly S.E. by E. [*E.S.E.* ½ *E.*] seven miles, to Colombara lighthouse, which distinguishes the western side of the port. You will thus pass over a foul patch, lying nearly in the midway, and over which the least depth is 5¼ fathoms.

FAVIGNANA lies at the distance of 10 miles from Maritimo, and the bearing of its north point from the castle of Maritimo is S.E. by E. ½ E. [*E. by S.*] The island, which is very irregularly formed, is 14 miles in circuit, and the greater part is low, but a remarkable mountain extends through its central part from north to south. The population is estimated at 2,300, exclusive of the garrison, and from 300 to 400 convicts.

At half a league South (by compass) from *Point Faraglione*, the north point, is the port, a fine cove, having on its eastern side the town of *San Leonardo*, and gardens yielding peaches, pomegranates, grapes, and vegetables. The chief defence of the island is the Castle of St. Catharine, which stands on the summit of the high land, and is considered impregnable. On its keep is a telegraph, in communication with one on Maritimo. There is a smaller fort, *San Giacomo*, on a hillock S.E. of the port, in which are confined a gang of the vilest criminals of Sicily. At the entrance, on the eastern side, is another, *San Leonardo*.

Favignana derives a considerable revenue from its tunny and anchovy fisheries, its quarries

quarries of stone, and the sale of sheep, goats, and poultry. The island abounds with game, and is actually infested with hares and rabbits. Fish, also, is most abundant. The depths in the port, which is open to the north, shoalen from 6 to 4, 3, and 2, fathoms.

At the N.E. end of Favignana is a cove, the *Cala Rossa*, in which there are good berths in from 20 to 7 fathoms, where a moderate supply of vegetables, fruit, and water, may be obtained, and advantage of any wind, for coming or going, may be taken. To the southward of Favignana, at the distance of from 1¾ to 4 miles, are two distinct banks, called the *Banks of St. Catharine*, divided by a deep channel of one mile. The least water on the southern one is 17 fathoms, but on the northern only 3½, rocky ground, and this near its northern edge, with St. Catharine's Castle on Favignana bearing N.N.E. [*N. ¼ E.*]

LEVANSO lies at the distance of 4 miles to the N.N.E. of Favignana. This island is about six miles in circuit, high, rugged, and inaccessible, two or three spots excepted, and very thinly inhabited. It produces a little grain and fruit, with some sheep and goats: but the chief produce is fagots from the stunted woods, which are sent over to Sicily. On the south side of the isle are some rocks, called the *Sugar-loaves*, near which, and all round the coast, is excellent fishing.

The FORMICHE, or ANTS, are two low barren islets, at the distance of nearly a league eastward from the S.E. point of Levanso, and separated by a channel of half a mile. The western is the smallest, and a desert. The largest, nearly square, and half a mile broad, is covered with large stone buildings, consisting of the storehouses belonging to a tonnara, a tower with bastions, a chapel, and a village inhabited by the fishermen, having a fine capacious cistern for water. On the S.E. side is a little port, in which a few small vessels may lie securely.

At one-fifth of a mile from the south side of the eastern Formiche is a shoal spot of 3 fathoms: and, to the eastward [*E.N.E.*] of the castle, about half a mile, is a rocky shoal, having over it but little more than two fathoms. The channel between the Formiche may be taken in fine weather, but it is better to avoid it, as there is a shoal of 2½ fathoms nearly in mid-channel. The western side has 7 and 8 fathoms.

ANCHORAGE.—In a centrical situation between Favignana, the Formiche, and Levanso, is an eligible rendezvous for a fleet, with excellent anchorage, in 21 fathoms, mud, just off the gravelly bottom, with the greater isle of the Formiche E.N.E.; the north point of Levanso N. ¼ W.; and St. Catharine's Castle, in Favignana, nearly W. by S.

PORCELLI or PIG ROCKS.—The *Porcelli* or *Pigs*, a dangerous reef, on a wash with the water, lie at the distance of 4 miles E. ¼ S. [*E.N.E. ¼ E.*] from Point Grosso, the north point of Levanso. The reef is steep on all sides; there being 17, 12, and 8 fathoms, and all at once scarcely a foot, and many of the summits above water, but generally surrounded by breakers. Between the outer pinnacle on the north, and the main body of the shoal, is a swash of 6 or 7 fathoms, in which a boat may moor, in fine weather, for fishing. The reef lies with Colombara light-tower (near Trapani) nearly S.S.E., and Formiche tower S.S.W. ¼ W.

PANTELLARIA lies nearly on the meridian of Maritimo, at the distance of 72 miles, its centre being in latitude 36° 48′, and longitude 11° 58′. This island, a dependency of Sicily, is about 30 miles in circumference, entirely volcanic, its features being the vestiges of craters, with prodigious quantities of lava, pumice, scoria, and pozzolana, hot springs, vapour-stoves, and grottoes formed by corrosion. The interior is divided into broken hills, covered with brush-wood, and ravines, and valleys, moderately cultivated with olives, figs, vines, cotton, and vegetables. A considerable quantity of orchilla, for dyeing, is also collected here. The fruits are fine; raisins especially, which are considered as included with the best and cheapest in the Mediterranean Sea. For three-fourths of the corn required for the island they depend on Sicily. The population is estimated at 4,600, among whom are some criminals, &c. The language and dress of the inhabitants are a mixture of Italian and Arabic.

The island is so high that, in moderately clear weather, it may be seen from the deck of a frigate at the distance of 15 leagues. Its summit is near the centre of the island, and it appears sloping downward to each end; but the east end is much higher than the west.

The highest mountain is clothed, on its southern side, with a wood of fine trees, chiefly of chestnut and oak, and lower down the olive flourishes luxuriantly. Within the summit is a great natural curiosity, the remains of a crater, converted into a lake of unfathomable water; this lake was visited by two British officers, in 1817, who describe it as about four miles

miles inland, the way to it being over a very rugged narrow road, ascending nearly all the way to the summit, and thence downward, by perpendicular cliffs, of 80 or 100 feet, to the lake.

The lake is inclosed by a wall of stone. On the declivity upon one side, opposite to the point of ascent, is some finely cultivated land, with buildings on the ridges, and farm-houses: beneath this is a tract of fine dark soil, regularly walled in, and having at the north end a pool, about 6 feet round, the water of which boils, and has a sulphureous brackish taste. On the opposite side are some cotton fields. At the east end is a road and stone wall to the house of the hospitable Sen. *Bocanagra*, whose extensive plantation is on the border of the lake. From this place, when prepared, figs, grapes, currants, &c. are sent to the market.

The ridge of high land around the lake forms a complete amphitheatre, and the top of it commands a delightful view of the lake and cultivated valley; also of the sea and hills around.

The town and castle of Pantellaria are at the head of a cove, conveniently situated on the N.W. side of the island, but open to a grown swell. The town is a large but poor place, of a miserable aspect, and loaded with a large church, several chapels, and a capuchin establishment. The harbour is convenient for the small vessels of the place, which are employed chiefly in the exportation of wine, oil, cotton, orchilla, raisins, and a little alum. Water and refreshments may be obtained here, but not in great plenty. From the harbour, eastward, the shore is steril and rocky. The north coast is terminated by two coves, *Cala Tramontana* and *Cala Levante*, both exceedingly picturesque, and separated by an isthmus-point, off which lies, as is common in the Æolian Islands, a high rocky islet, with a deep channel between. The east and south coasts consist of steep and inaccessible cliffs, with basaltic coves at the base, much frequented by wild pigeons.

Large ships may anchor off the harbour, by bringing the castle to bear S.S.E. ½ E. [*S.E.*] two miles distant, where there is a depth of 18 fathoms, with sandy ground. Within this station the ground is rocky and foul, and a chain cable should be used. In the middle of the cove are numerous rocks above water, between which and a point of land, that projects from the east side of the harbour, the passage in is only 50 fathoms wide and 2½ deep. Within this the country craft are moored. The landing place is at a small pier under a chapel standing near the castle-wall, to the eastward. The place to send for pratique is in a cove of St. Leonardo, the north point of the harbour, whither the officers of the health-office repair to meet the boat.

There are several landing places on the western shore of Pantellaria, but the ground, on approaching, is nearly the same as on the other coasts, and may be indicated by the lead. It is only to be observed, that there is a rock, of 5 fathoms, at about a mile and a quarter to the south-westward of *Point Nica*, the S.W. point of the island.

WESTERN AND SOUTHERN COASTS OF SICILY, FROM CAPE ST. VITO TO CAPE PASSARO.

GEODETIC POSITIONS.	Lat. N.				Long. E.		
Cape Cofano	38°	7′	21″	..	12°	42′	48″
TRAPANI; Colombara Light	38	1	53	..	12	30	18
MARSALA; Cape Boeo	37	48	10	..	12	25	10
Mazzara; citadel	37	39	56	..	12	33	59
Cape Granitola	37	33	57	..	12	36	39
Cape S. Marco; tower battery	37	29	15	..	13	0	20
Sciacca; Castle Peralta	37	29	50	..	13	4	46
Cape Bianco; turret	37	22	25	..	13	16	27
Torre Rosso	37	17	20	..	13	25	50
Girgenti; the mole	37	15	40	..	13	31	40
the cathedral	37	17	44	..	13	34	6
Palma; the Marina	37	8	47	..	13	43	11
Alicata; castle	37	4	3	..	13	55	54
Terra-nova; column	37	2	54	..	14	15	0
Scoglietti; chapel	36	52	34	..	14	27	25
Cape Scalambra; tower	36	46	13	..	14	30	15
Punta Spina	36	44	0	..	14	39	0
Current Island	36	38	10	..	15	3	5

CAPE

CAPE ST. VITO, the usual landfall for vessels bound to Palermo, &c. has already been described on page 131. From the N.W. extremity of Cape St. Vito the outer extremity of *Cape Cofano* bears nearly S.W. [*S.S.W. ½ W.*] distant 5 miles. Cape Cofano is the extremity of a rugged conical mount, carrying 10 fathoms close under it, and having a stout tower of defence upon it. On the north side is a large farm and a tonnara (tunny fishery), for the boats of which there is secure anchorage under an islet named *Vermia.*

The space between the Capes of St. Vito and Cofano is called the *Bay of Calazzi*, and it affords shelter in south-easterly gales, its bottom being deep and clean: the beach has excellent landing to the *Tower of Lucchesi*, which stands in lat. 30° 10′ 30″, and long. 12° 46′.

At 5 miles W. by S. from Cape Cofano is *Point Emilia*, a low tongue of land, with a small sugar-loaf peak on it, over which, to the southward, is the high *Mount of St. Julian*, [San Giuliano,] and westward of it, at two miles, is a large barren rock or islet, called the *Asinello.* The *Emilia Shoal*, a steep reef, lies at a mile N.N.E. from the point: the depth over it is two fathoms, with from 6 to 10 immediately around it. In the middle of the channel between Point Emilia and the Asinello there is a depth of 16 fathoms.

MONTE DI SAN GIULIANO, or MOUNT ST. JULIAN, is the antient *Mons Eryx*, on which, at an elevation of 2175 feet, once stood the famous temple of *Venus Erycina*, one of the most magnificent and the most sensual of all the heathen establishments. Of this temple few vestiges now remain, and Eryx is, at present, an abrupt and sterile mountain, still resorted to by wild pigeons.

On the very summit of the mount is the town of *San Giuliano*, or *St. Julian*, or *Old Trapani*, with about 8,000 indolent and poor inhabitants: it is surrounded by a dilapidated wall with square turrets, has a high tower to the west, and a Saracenic castle, with battlements, on its eastern angle. To the S.W. of the town is a spring of pure water, which supplies a fine aqueduct conveying it into Trapani.

Between Point Emilia and *Sigia Point*, the outer point of Trapani, the bearing and distance are W. by S. [*S.W. by W. ½ W.*] 5 miles. To more than two miles of this distance the shore is rocky and broken: at half a mile farther southward, amongst trees, is the small village of *Casimani*, and beyond this, at about a mile toward Trapani, is the Point, Tower, and Tonnara, of St. Julian. In the first part, or two miles, of this distance the ground is foul, to nearly half a mile out: but, from Casimani to St. Julian's Point, and from that point to Trapani, are fine sandy beaches. There are rocks about the point, and there the ground is foul.

TRAPANI.—The city of TRAPANI is 3½ miles to the westward of the town of St. Julian. This is a fortified city, on a low tongue of land, and entirely surrounded by a wall, with bastion, ravelins, &c. It contains about 25,000 inhabitants, generally industrious and enterprising, among whom are included the best artists, artificers, and sailors, &c., in Sicily. The town is commodious; the streets regular; the cathedral and senatorial palaces fine edifices; there are many convents, and nearly forty churches; besides which, are two hospitals, and other public institutions.

The N.W. extremity of the land is *Sigia Point*, with its tower, about which the ground is shoal and broken into several islets, &c., of which the southernmost is the *Colombara*, having on its inner end the lighthouse, already mentioned. Between Sigia Point and the city is a fine promenade. The Marina, a good walk under the line-wall, is ornamented with statues of Victor Amadeus and Philip V., and finished with a mole, on which stands the pratique-office. The harbour, which is on the south side of the city, is small and shoal. Off Sigia Tower, to the West, are several abrupt rocks, called *I Scogli di Mal Consiglio*, (Rocks of Bad Counsel): these are low, cragged, and exposed. The entrance of the harbour is protected by Sigia Tower, the fire of which, at a little distance, is crossed by the lighthouse-battery on Colombara, which faces the south.

Those from the eastward, bound to Trapani, after rounding Cape St. Vito, will see the town of St. Julian on the summit of the mountain, and may then stand close in with the coast until past Cape Cofano, whence an offing must be made, in order to clear the Emilia Shoal, which extends a mile from shore: or, with a leading wind, a ship may shape a course in the day-time, direct from Cape St. Vito to the island Levanso, until the islet Asinello is abaft the beam, and then stand on, through the channel, between the Porcelli and Mal Consiglio Rocks, for the anchorage.

Vessels of from 200 to 300 tons may lie at the kay, just above the pratique-office, where it

it is usual to have a fast under the walls, and an anchor laid out on the mud-shoals. Ships of greater draught bring up near the Colombara, in from 8 to 10 fathoms, muddy bottom, but uneven and patchy. The people of the country carry fasts to the shore, but Captain Smyth prefers mooring with the anchors S.S.E. and N.N.W. The ground over all this part is very much broken, and occasions strong counter-tides in fresh breezes; though they are never so strong but that a ship may beat against them.

The INNER CHANNEL, eastward of the *Porcelli*, is perfectly safe with a leading wind, but a sudden shift and a set of the current may bewilder a stranger, and the quarantine regulations often impede the advantage of having a pilot. If proceeding this way, on making Trapani, at a distance, the tops of the houses will look like several sail, while Mount St. Julian will be clearly recognized by the town on its summit. In running on, you must carefully avoid the dangerous reef, called the Porcelli (*see page* 147); and, on passing the islet Asinello, which may be seen to the eastward, bring the Tower of the *Formiche* to bear S.W. by W. ½ W. Having thus passed the Porcelli well to the eastward, in order to arrive at the anchorage of Trapani, the Mal Consiglio Rocks and Sigia Point may be rounded by keeping them at a short mile distant, and you thus avoid the *Bullata*, a small ledge, of 9 feet of water, which lies on the edge of the shoal ground. The rock of Colombara may be approached to three-quarters of a cable, until opposite the lighthouse, where large ships find the best anchorage by bringing it to bear nearly N. by E. [*N. ½ W.*] Smaller vessels may lie as above described.

But a plain clear channel for Trapani is to be found by running from the northward for the island *Levanso*, guarding against the Porcelli, which lie 4 miles more to the eastward, and passing the eastern side of Levanso, at about a mile off, then shaping a course for Cala Rossa, or the N.W. coast of Favignana, whence you proceed E. by N. for Trapani, leaving the Formiche on the left or larboard side.

In the night, or in thick weather, the passage between Maritimo and Levanso should be preferred, as it is clear of all danger, although overfalls sometimes show on a rocky patch, of 7 or 8 fathoms, about 3 miles to the westward of Levanso Sugar-Loaf. (See page 147.) But it must be recollected, that the east and west coasts of Favignana are low, and not easily seen in a dark night. The Banks of St. Catharine, to the southward of Favignana, have been noticed on page 147.

FROM TRAPANI SOUTHWARD, to *Cape Boëo* and the city of *Marsala*, a distance of 5 leagues, the coast is altogether low, irregular, broken, and variegated by numerous islets upon a base of shoal and rocky ground, which, in some parts, extends two miles from shore. Hence the clear channel eastward of Favignana, is only half a league broad.

In the first half of the distance between Trapani and Cape Boëo, the beach is flanked by the towers of Calcara, Nubia, Mezzo or Migrano, and Theodore, and the intervening country, to some distance, is laid out in extensive salt-works, by the construction of innumerable causeys, about a foot and a half high, inclosing square places, which communicate by dams with each other. Great part of the salt is sent to Marseilles, &c. The salt is heaped up in pyramids, ready for exportation; and, at the backs of these heaps, which, at a distance, resemble tents, stands the little town of *Paceco*, a healthy spot, with about 2000 inhabitants. This town is at a league southward [*S.S.E.*] of Trapani, and is supposed to take its name from Pacheco, the heroic wife of the illustrious Don Juan de Padilla, who lost his life, in consequence of a struggle for freedom in Spain, 24th of April, 1521. The space between it and Mount St. Julian, antiently known as the *Field of Hercules*, produces sweet wine, corn, oil, and barilla.

Between Theodore Tower and Cape Boëo is the *Groupe of Stagnone*, a cluster of low isles, on the shoal ground already noticed. Of these isles the principal are, Borrone, Favilla, Cernisi, and St. Pantaleo. On the northern isle, Borrone, is the *Saline del Curto*, the produce of which is esteemed the finest in the neighbourhood. Favilla and Cernisi lie immediately to the southward; they are connected by salt-works, and defended by two towers. Phosphorescent medusæ and other molluscæ are very abundant here in the autumn. Between these isles and the shore of Sicily is the isle *S. Pantaleo*, where stood the antient town of *Motya*, of which some vestiges still exist.

MARSALA.—CAPE BOËO, the westernmost point of Sicily, is 3½ miles southwestward from the south end of Cernisi. The cape is low, and over it, in a healthy situation, is the city of MARSALA. This city is of a square form, surrounded by an old wall, on which there are houses, and is tolerably well built. It is bisected from N.W. to S.E. by a regular

regular street called the *Cassaro*, on one side of which is the cathedral, a large edifice. The town, of course, contains convents, and other public buildings. The inhabitants amount to about 21,000, who trade in excellent wine, fruit, and barilla.

At a mile to the southward of the city is the English Wine Establishment, before which is a small mole, constructed by the merchant, Mr. Woodhouse. The ground hereabout, and around Cape Boëo, is all shoal and foul, and large ships must lie to the S.W. of the city, in from 11 to 8 fathoms, at nearly two miles from shore, as the rocky bottom extends more than a mile from the land.

The country, for a few miles to the northward of Marsala, is called the *Terra Spagnola*, and presents a continuation of market-gardens and vineyards, shelving down from a gentle acclivity toward the smooth water inclosed by the Groupe of Stagnone.

Between Marsala and the outer point of Cape Boëo is the small chapel of St. John, in a circular form, and serving as a useful mark. At this place is a spring of fresh water, to which peculiar qualities are attributed, especially on the festival of the saint to whom it is dedicated.

A small port is formed between the beach near the English establishment, above-mentioned, and the reef which lies off shore. Between the mole and beach are from 7 to 14 feet, with stiff bottom; but, on the opposite side, the reefs, trending south-eastward from Cape Boëo, are, in many places, even with the water's edge. You may enter with the mole-head and English establishment E. ¼ N. until the chapel of St. John bears N. ¼ W., and drop an anchor, at a little more to the north, near the shore.

Vessels from Trapani, bound to the southward and eastward of Favignana, must first give the Formiche a berth, by keeping them about a mile to the westward, the lead carrying 10 and 12 fathoms: thence stand away toward Cala Rossa, at the N.E. end of Favignana, and pass its high eastern point, at the distance of half a mile. Thus you will clear the dangerous shoals of Borrone, extending from shore, and steer to the southward as convenient.

MAZZARA.—At 9 miles S. by E. [*S.S.E. ¼ E.*] from Cape Boëo is *Point Feto*. The coast between is altogether low, shoal, and rocky, and the people of it live mostly by fishing. At a league to the eastward of Point Feto is the town of *Mazzara*, with about 8000 inhabitants; and, at two leagues to the southward of Mazzara is the headland named Cape Granitola, which bounds the western and southern coasts of Sicily. Throughout this extent, and more especially around Cape Granitola, the coast continues rocky and shoal.

Mazzara, though small, has a respectable appearance from seaward, the domes rising above the houses; but, on entering, an unhappy contrast is presented, as the streets are narrow, unpaved, and dirty: yet it is a place of some traffic, making large exports of grain, pulse, cotton, wine, fruit, fish, barilla, madder-roots, oil, and soap, although it has no harbour. The town is surrounded by an old Saracenic wall, and has a ruinous castle at its S.W. angle. The public buildings are large and heavy, poor, and dirty; and it is said, that 'every house and hovel in Mazzara contains a priest and a pig.' A statue of St. Vitus, however, ornaments the entrance of the port.

The entrance of the River Salemi forms the little haven of Mazzara, and is convenient for small craft; but larger vessels are obliged to lie at a very exposed anchorage without, in from 8 to 12 fathoms. From 10 fathoms, clay bottom, about a mile and a half from shore, Point Feto bears N.N.W. ½ W. [*N.W.*]; Mazzara citadel East [*N.E. by E. ½ E.*]; and Cape Granitola S.S.E. [*S.E. ¼ S.*] It is not prudent to anchor nearer, on account of overfalls caused by fresh breezes, or by the *Marobia*, or *Mare Ubbriaco*, or *Drunken Sea*, which sometimes prevails here.

The Marobia is a singular phenomenon, an unaccountable movement of the water, occurring principally on the southern coast of Sicily, generally found to happen in calm weather, and considered as a certain precursor of a gale. It is generally felt with the greatest violence about Mazzara, owing, as Captain Smyth supposes, to the contour of the coast. "Its approach is announced by a stillness in the atmosphere and a lurid sky; when suddenly the water rises nearly two feet above its usual level, and rushes into the creeks with amazing rapidity; but in a few minutes, recedes again, with equal velocity, disturbing the mud, tearing up the sea-weed, and occasioning noisome effluvia: during its continuance the fish float quite helpless on the turbid surface, and are easily taken. These

These rapid changes generally continue from thirty minutes to more than two hours, and are succeeded by a breeze from the southward, which quickly increases to heavy gusts."

This phenomenon, Captain Smyth thinks, may be occasioned by a westerly wind blowing, at some distance in the offing, toward the north coast of Sicily, and a south-east wind, at the same time in the channel of Malta, the meeting of which would take place between Trapani and Cape S. Marco:* for it is to be noticed that the westerly wind most usually precedes, and the S.E. succeeds, the Marobia.

CAPE GRANITOLA.—From the beach of Mazzara the coast curves to the southward, 6 miles, to the point of Cape Granitola. This cape is a long, low, and sandy projection, bordered by a dangerous reef, on which, from want of a lighthouse, many vessels have been lost. The land is flat, and cannot be seen, in thick weather, before a vessel is on the shoals, and the coast is the more dangerous as the currents here, depending on previous winds, are frequent and uncertain, more especially the Marobia, above described. The small white tower of Caldara, stands on the rising ground, at a mile and a quarter to the northward of the extremity of the Cape.

Captain Smyth says, that ships should never approach Cape Granitola nearer than two miles: but, should a vessel, by stress of weather, or otherwise, get on the shoals, he particularly cautions the crew against attempting to land, during a fresh breeze, near the point, it being shallow on its approach, and generally beat by a very heavy surf, with a strong re-surge. In such a case the boat should pull, at a prudent distance from shore, to *Trefontané*, (two miles eastward,) if the wind is from the westward; or to *Cala Dajolo*, (two miles northward) if the wind be from the eastward. From either of these places there is no difficulty in communicating with Mazzara.

SOUTHERN COAST.—The SOUTHERN COAST OF SICILY, between CAPE GRANITOLA and CAPE PASSARO, is generally low and arid, and does not possess a single harbour for large ships, though there are several tolerable summer anchorages: of these the principal are those of *Sciacca*, *Siculiana*, *Girgenti*, *Alicata*, and *Port Paolo*: the secondary ones are Porto Palo, Palma, Port Nicolo, Terra-Novo, Scoglietti, Secca, Pozzallo, and La Marza, with several intermediate ones, of less importance.

The most remarkable headlands of the coast are, Cape San Marco, Cape Bianco, Point Tenda, Cape Scalambra, and Cape Passaro. Toward these the approaches are not so clean, nor so deep, as those of the northern and eastern shores. Captain Smyth's general rule for a stranger, working along the coast at night, is, not to stand inside of 17 to 20 fathoms: by day he may close to 12.

The TIDES, or rather the CURRENTS, arising from the constant evaporation and the action of the winds, observe no regularity, rising a foot or two, according to the weather and the peculiarities of locality and depth: thus the N.W. wind, raking the shores, promotes a strong set to the S.E.; while the S.W. wind, which is very sensibly felt during the vernal equinox, causes strong counter-currents; and, at length, on a change of wind to the opposite quarter, the whole body of water rushes to the westward with considerable velocity.

In long settled weather, the currents between Sicily and the African shore, and even westward of Galita, or the meridian of 9 degrees, run to the eastward at the rate of from half a mile to one mile an hour. In the channel of Malta the current to the S.E. has, at times, been so strong that ships have found it difficult to beat up to Maritimo; while others, driven to leeward of Malta, have been obliged to carry a press of sail in order to hold their own, until a change of wind enables them to make the island again. Another proof of the influence of this current is, that ships stretching over from Cape Passaro to Valetta, with a northerly wind, usually keep a point higher than their true course, to ensure reaching it.

CAPE GRANITOLA to CAPE SAN MARCO.—The long but slender bay between these points, which are 20 miles apart, is called the Gulf [Bay] of *Tre Fontané*. It has regular soundings, and the access is easy, but affords no good shelter, excepting for small craft, which may be found at Porto Palo, 13 miles from Cape Granitola.

Midway between Cape Granitola and Port Palo are the solitary ruins of *Selynus* or *Selinuntum*, standing on an elevated but lonely plain, between two small rivers, and

* Cape San Marco is about 20 miles south-eastward [*E.S.E. ½ E.*] from Cape Granitola.

appearing,

appearing, at no great distance, like a large city. These extraordinary vestiges of antient greatness, though only an incongruous mass of shafts of columns, metopæ, capitals, &c. excite admiration, and attest the mighty exertions, on this spot, of a once energetic people. Hereabout is a fishery of anchovies and sardinas. The country about Selinuntum is covered with dwarf palms, wild olives, and myrtles, abounds with game, and is almost uncultivated.

Cape San Marco is an abrupt forked point, of reddish colour, and a moderate height: it forms the western extremity of *Sciacca Bay*, has a square tower with a battery on its summit, and at its base a shelf of rocks; but it may be approached by the lead within a short distance.

SCIACCA, &c.—From *Cape S. Marco* to *Cape Bianco* the coast forms another long and slender bay. The bearing and distance from one point to the other are S.E. [*S.E. by E. ½ E.*] 14 miles. At a league to the eastward of Cape S. Marco is the town of *Sciacca*, containing 11,000 people, and one of the principal caricatori, or loading places, on the southern coast. Its exports are corn, fruit, anchovies, sulphur, and barilla.

This town rises on an eminence from the sea, and is surrounded by an irregular wall, with a castle at its eastern angle, and a bastion or two toward the sea. Like some other towns on the coast, Sciacca appears respectable at a distance; but, although it has large churches, convents, and magazines, it is a poor and wretched place. The country around is luxuriant and productive, and trade is sometimes brisk. The long-esteemed baths are supplied from two springs without the town to the eastward.

Ships, in the summer, ride at about a mile off Sciacca, in from 7 to 12 fathoms, sand and clay, but they are exposed to every wind from S.E., by the South, to West, so that the anchorage can be used with safety during the fine months only; but boats and flat-bottomed vessels may be hauled up on the beach. The best spot for anchoring is in 8 fathoms, mud, about a mile off shore, with Cape S. Marco N.W. by W.; Sciacca Castle N. by E. ½ E.; a tower named Christauro (5½ miles dist.) E. by S.; and Cape Bianco S.E. ½ S.

CAPE BIANCO is a white promontory, about 90 feet high, with a shoal reef extending from it nearly a mile and a half to the southward: between it and Sciacca the country presents an extensive plain, watered by several rivers, in some of which is good fishing; the grounds are excellently cultivated, and the coast protected by several towers, that of *Verdura*, exactly half-way between Sciacca and Cape Bianco, being the best. The land at the back of the plain is high and very rugged.*

SICULIANA.—At 4 miles inland, eastward of Cape Bianco, on a hill, is the miserable village of MONTE ALLEGRO; and, at 8 miles to the south-eastward of the cape is the town of SICULIANA, having about 4,500 inhabitants. The latter stands at a little distance inland, upon two hills, in an abrupt and barren country; it is pleasantly situated, but suffers greatly from malaria. The chief article of exportation hence is sulphur, of which there are extensive mines in the neighbourhood. For several miles westward of this place the coast is rocky and sterile; the fields appear neglected; the humble palm, on which the cattle sometimes browse, and the scilla, or squills, are suffered to overgrow the few arable lands. Many of the natives hereabout want the common necessaries of life, bread being scarce and milk hardly to be procured.

The caricatore, or loading place, for the sulphur, is on the west bank of a rivulet, called the Canna; and before it, at nearly half a mile off shore, is a rocky shoal, which stretches along the coast, having over it from 1 to 3 fathoms, with 5 fathoms, sand, inside. Ships of burthen usually anchor about a mile and a quarter out, in from 7 to 11 fathoms, sand and clay, with large pebbles that rub the cables; but those of from 180 to 250 tons can pass the reef at a favorable moment, and moor securely inside it. In settled weather, and the lading ready, which it generally is, a vessel may ride comfortably about a mile and a half

* The remarkable sub-aqueous volcano of 1831, between Cape Bianco and Pantellaria, (in or about lat. 37° 8½′ and long. 12° 44′,) which formed an islet, is described in our larger Directory, pages 169 and xvi. In the month of July the islet had acquired an elevation of 80 feet, and in the following month 160 to 180 feet, with the circumference of a mile, but in January, 1832, it disappeared, while there then existed a vast column of boiling water, rising from 10 to 30 feet above the surface of the sea. By the close of Jan. 1832 the islet had sunk some feet below the water, and it has since entirely disappeared, without, it is believed, leaving even a shoal on the spot; although smoke from the sea has since been observed in the vicinity of 60 and 80 fathoms of water.

off shore, in 9 fathoms, mud, with Cape Bianco N.W. by N.; the Torre Felice, on the west of the rivulet, N. by E. ¾ E.; Siculiana castle N.E. ½ E.; and Rosso tower, two miles distant, E.S.E.

South-eastward of the Bay of Siculiana, within the distance of 2½ miles, the coast is without hidden dangers; but there are two brownish red points with rocky bases, having on them the towers of *Rosso* and *Rosello*, with a sandy cove between. At a mile without, the depths are 6 and 7 fathoms.

GIRGENTI.—At 4 miles eastward from Point Rosello are the Mole and Caricatore of Girgenti. This mole was constructed by order of Charles III. in 1756, but is already so worn by corrosion, as to appear much older. Its entrance is toward the east. The caricatore consists of about 100 houses, beside some extensive corn magazines and a prison, with a population of 700 individuals, exclusive of 200 or 300 wretched convicts, who are kept for the purpose of clearing the harbour from deposits caused by the winds. There are two lighthouses, one on the mole-head and the other on the cliff, but they are so kept as to be nearly useless.

The CITY of GIRGENTI, with 15,000 inhabitants, stands on the side of a hill, at nearly 1,200 feet above the level of the sea, and so that nearly every house may be seen. It is three miles inland, north-eastward of the mole; irregular, dirty, ill-paved, and poor in appearance: but clergy and monks abound. The cathedral is a large heavy structure of the thirteenth century. A high rocky mount to the eastward of the city is called *Rupe Athanea*; and below this, toward the sea, between the two branches of the River Girgenti is the site of the antient *Agrigentum*, which once contained 200,000 inhabitants, renowned for power and commercial enterprise.* The space which was occupied by this city is now a continued range of orchards and gardens, and of groves of almond and olive trees.

The *River di Naro* falls into the sea at 5½ miles to the south-eastward of the Mole of Girgenti. At nearly half-way between is the River of Girgenti choked with shallows; and opposite to the stream of this river, at three miles from the coast, is the *Melville Shoal*, a bank to be avoided when standing in for the anchorage. This bank is half a league in length, trending E.S.E. and W.N.W. *true*, and has on its shoalest part from 3½ to 5 fathoms, deepening gradually, with rocky patches, to 10 and 12, and thence, every way, to 13 and 15 fathoms. The shoalest part lies with the mole-tower on with the upper lighthouse; Rosello Tower open to the eastward of Rosso, and the central part of Girgenti N.E. by N. [*N. by E. ½ E.*]

Between Melville Shoal and the Mole-head is excellent anchorage, which may be taken at choice, in from 10 to 7 fathoms, sand and clay, with a level and clean bottom. Although vessels are here exposed to all winds, from between the W.N.W., by the South, to S.E., no common gale need excite any serious apprehension. The following bearings give a station in command of the mole-head, in case of a S.W. wind, though farther out than a vessel need lie in the summer season.

Rosello Tower, N.W. ½ W.; Mole prison tower, N. by E. ½ E.; Centre of Girgenti, N.E. by E. ½ E.; Point Bianco (6½ miles distant) S.E. ½ S.

The mole is convenient; has a good watering place in the middle, and mooring-posts all round; terminated by a mole-head battery and the lighthouse before-mentioned: its depth cannot always be depended on, because southerly winds send in a quantity of sand and silt; but usually, at the mole-head and the inner part of the southern arm, there are 2½ and 3 fathoms, decreasing rapidly toward the centre to 11 and 9 feet toward the shoal that stretches from shore. A vessel going in should be certain that there is a vacant berth; for the port being small, and the only one on the coast, is generally crowded. Should the mole be sufficiently clear, as much sail must be kept set, till the moment of anchoring, as will give considerable way in; for the wind and current, being acted upon by the mole-head, often cause a ship to drift out. If the weather permits, a hawser should be previously sent to be made fast to the mole-head mooring post, and taken on board the moment the vessel is rounding it, to prevent her falling on the shallows.

By a port regulation, when ships arrive, the first that delivers her ballast, and takes in any portion of her cargo, as a few pigs of sulphur, or a little grain, or any other article,

* See Captain Smyth's classical plan of the City, Environs, and Anchorage, of Girgenti.

must

must be completely loaded before another is commenced. This regulation is generally advantageous to commanders acquainted with the place.

It is now to be observed that there is a *dangerous sunken rock*, at about a mile and a quarter out, opposite to the mouth of the River Naro. It has only 4 feet of water on it, with 6 or 7 fathoms all round, at the distance of a few yards. It lies with Rosso Tower over a white cliff to the westward, and the round white tower of Palu (3 leagues distant,) S.E. ¼ E. between Point Bianco and Monte Grande, described hereafter.

Point Bianco lies 3 miles S.E. ¼ S. from the rock last described, and off it are two rocks above water, of which the largest is named the *Patella*. There is a passage of 7 fathoms, nearly half a mile broad, between them and the main.

Monte Chiaro.—The outer point of *Monte Chiaro* is two miles to the south-eastward from Point Bianco. On the summit of the hill is a castle, consisting of a large square keep with outworks, and at the base is a continuous shelf of rocks along shore, which break to some distance outward. In rough weather the land here is almost inaccessible.

PALMA.—At about two miles inland from the beach, and three miles eastward from Monte Chiaro castle, is the respectable town of Palma, containing upward of 8000 persons, who enjoy comparative affluence, which arises chiefly from a brisk trade in almonds and sulphur. The town overlooks one of the finest vales in Sicily, and is well regulated. The adjacent country, also, is well cultivated, and many cattle are reared on wastes and commons in the vicinity.

The S.E. point of the Bay of Palma is *Point Tenda*, which is 3½ miles from the point of Monte Chiaro. In Palma Bay, westward of this point, is the Marina of Palma, with some magazines and a stout tower for their protection. Vessels ride off this place in from 5 to 8 fathoms, good ground, but exposed to the sea. The round white tower of *Palu*, on the brow of a hill two miles eastward from the beach of Palma, is an excellent mark for this coast.

ALICATA.—The town of Alicata, or *Licata*, with about 11,000 inhabitants, stands at the distance of three leagues S.E. ¼ E. [*E.S.E.* ¼ *E.*] from Point Tenda. On this bearing, at the distance of half a league from that point, is *Point Rosa*, and off this point is a bank of 7 fathoms, but clear of danger, with slight overfalls only. The middle of the bank is nearly on the meridian of Palu Tower, above-mentioned.

We have now arrived at the semi-circular bay of *Grugno*, the outer points of which are a league asunder, and the coast within a sandy beach. In the middle of this bay is the mouth of the little River *Ciotta*, with its bar. On the rising land, east of this river, is the high, but useless, tower of Grugno, with a few magazines at its base. The coast hereabout may be approached by the lead with the utmost safety.

At a mile eastward from the Bay of Grugno is a singular little cove, called Port S. Nicolo, where small craft find shelter, in from 4 to 2 fathoms. This harbour is formed by an islet of rock, connected to the main by a narrow neck of low land, and a large valley stretches from its beach toward an extensive plain, that of *Serrata*.

The ground about Alicata is rocky and shoal; the town has two tolerable forts, but the walls have gone to decay, and are lying in large fragments on the beach. Here are several churches and convents, but the general appearance is that of neglect and poverty: yet the town is a place of some trade in the summer season, being a caricatore for the export of grain and sulphur. The hill on the west of Alicata is the antient *Ecnomus*; on the N.E. the river Salso falls into the bay; this river is considered as the largest in Sicily: on its eastern bank is the Fonducello Hillock. Over the Salso is a large bridge, with a single arch, built by order of Charles V.

The usual anchorage is about a mile S.W. of the town, in from 7 to 12 fathoms, good clay bottom: but it is exposed in winter to all winds from West, by the South, to East. In coming to, stand in by the lead, and bring the flagstaff of the sea castle to bear well to the eastward of the Fonducello Hillock, and drop the anchor as nearly as possible to the following bearings, buoying up the cables in light winds, to prevent chafing.

In 8½ fathoms, mud, about a mile off shore, Palu Castle, above Tenda Point, N.W. ¼ N.; Upper Castle, N. ¼ E.; Sea Castle, N.E. by E. ¼ E. [*N.E.*]; S. Nicola Rock (distant 4½ miles), E. ¼ N. [*E.N.E.*]

The River Salso divides the provinces of Mazzara and Noto. At its entrance is a shoal bar

bar of nearly a mile, on which the surf beats heavily with southerly winds. Boats may be admitted into the river, but the pass is narrow and difficult.

TERRA-NOVA.—At the distance of 14 miles E.S.E. [*E. ½ S.*] from Alicata is the caricatore of TERRA-NOVA. The first part of the coast between is the beach of *Foggitella*, which terminates at the rocky head of *S. Nicola*: beyond this, at the distance of two miles, is the rocky point of *Falconara*, distinguished by a large square tower, some magazines, and a country seat, near which are some beautiful and fertile grounds. The distance hence to the caricatore of Terra-nova is 8½ miles, and half-way between, over a projecting point, is the *Torre di Manfra*. The coast is generally an open beach.

The town of TERRA-NOVA stands on a tabled hill, and the neighbourhood constitutes the Geloan fields, so celebrated for corn. The town is finely situated, but the streets are confused and dirty. It has a fine palace, but its other edifices are unworthy of particular notice. The population, about 9000, maintain a brisk trade in sulphur, corn, wine, and coarse cloth; the last article, in particular, finds a good market at the commercial fair held in August.*

The anchorage is about a mile from the town, in from 7 to 11 fathoms, sand and mud; but it is much exposed, and every change of wind should be watched, as that from the S.W. sends in a great sea; and when it blows fresh there is not room to get under way and make sail. Small craft lie at the west end of the caricatore, under the *Torre dell' Insegna*, which stands at a small distance from the town, on the high land.

At 2½ leagues S.E. ½ S. [*S.E. by E.*] from the Caricatore of Terra-Nova is the mouth of the *River Dirillo*: and at three leagues S. by E. ½ E. [*S.E. by S.*] from this river are the village and caricatore of SCOGLIETTI, with capacious magazines on the side of a small rocky bay, which is entirely open to the heavy westerly winds so prevalent in winter, and which produce much mischief here.

CAPE SCALAMBRA, &c.—At half a league to the southward of Scoglietti is a small bay, the eastern side of which is a marsh, through which a stream finds its way to the sea. At three miles more to the south is *Point Bracetta*, and thence S.S.W., at the same distance, is *Cape Scalambra*. The last is a low rocky projection, and there are several points between it and Scoglietti. A reef extends all along this coast, which was greatly dreaded by the antients, and upon which, also, many modern ships have been lost, although it is approachable by the lead. Ships passing should never stand in within 14 fathoms; and, with a westerly wind, in particular, every precaution should be taken, allowing for current, &c.

On the eastern side of Cape Scalambra is PORT SECCA, a good place for vessels of light draught, being secured against a south-wester by a long low rock, but difficult of access with the wind blowing fresh, owing to the heavy overfalls on the coast. Eastward of Port Secco at 2½ and 5 miles, are the sandy bays of *Mazarella* and *Donna Lucata*.

In all these places small craft repair for cargoes, and in each the carouba, or locust bean, charcoal, wood, and some other produce of the district, are embarked.

The rocky point of *Spina*, the termination of a broad and elevated headland, lies at the distance of 8 miles S.E. by E. from Cape Scalambra. Here the coast again becomes foul and rocky. At 3 leagues farther, E.S.E. ½ E. [*East*] is *Pozzallo*, the principal caricatore of the country for the export of its produce; it affords summer anchorage, has a small pier, several magazines, a baronial palace, and a church, defended by a fort with a small garrison. This village has a flourishing appearance, and the inhabitants are healthy and industrious. Black cattle, sheep, pigs, rabbits, pigeons, fruit, and vegetables, may be purchased here at a moderate rate.

Between Point Spina and Pozzallo, at a league eastward from the former, is the cove of *San Pietro*, where, on a rocky point, at the end of a sandy beach, are a caricatore and

* The inland and well-governed city of CALTAGIRONE stands at the distance of 17 miles to the N.E. It contains 20,000 inhabitants, is opulent and extensive, and conduces greatly to the prosperity of Terra-Nova, whence its exports are made. This city stands on a rocky hill, in a salubrious situation; its streets are clean, spacious, and well paved; many of the palaces and other public buildings are handsome; the market is well supplied with provisions at moderate rates: notwithstanding all this, there are many beggars and idle persons. A great festival and fair is held here in October, for fifteen days, during which great sales are made of cattle, cloth, honey, poultry, and agricultural produce.

miserable

miserable village of 300 inhabitants: two other rocky points beyond this are named *Corvo* and *Gregorio*.

COAST to CAPE PASSARO.—To the eastward of Pozzallo, at the distance of five miles, are the tower and oratory of *Rosalini*, beyond the rivulet of *Busaidonc*, the limpid stream of which irrigates the lands of *Spaccaforno*, a walled town on a hill, three miles inland. This town has about 8000 inhabitants, with numerous churches, convents, and public buildings. The trade of this district is principally with Malta, and its exports are grain, flax, caroubas, acorns, soda, and cattle.

Two miles southward from Rosalini is Point Grotta, westward of which, at the distance of about a mile, is a group of flat rocks called the *Porri*, having a species of wild leek growing on them: southward of Grotta Point there is also a reef, the extremity of which is marked by two rocks above water, called *Chiappe*. Between these and the Porri there is a good channel of 8 or 10 fathoms. In the day-time the Porri may always be approached with the lead.

Immediately to the eastward of Grotta Point is the small shallow bay of *La Marza*; where charcoal and wood are embarked. Near the centre of it a spring of fresh water rises through the sea: and on its eastern point is Castelluccio, a wretched village.

CURRENT POINT, the southernmost point of Sicily, is nearly two leagues to the south-eastward of La Marza. Close to this point is the *Current Islet*, a sand-stone rock, divided from the main by a spit with very shallow water, over which even small boats cannot pass. On the N.E. side of the islet is a kind of natural mole, where the Maltese trading-boats sometimes take shelter. Northward of this is a cove called *Fontanelle*, with regular soundings, mud and sand; this extends to *Point Formiche*, on the north, a low white cliff, off which five black rocks appear just above the surface of the water, and a reef borders the shore to the distance of nearly a mile, having over it from 6 to 2 fathoms of water. This reef continues to beyond La Marza, &c.

Within Port Fontanelle is a smaller cove, between some picturesque white cliffs, with the remains of some antient sepulchres in a kind of rubble work. The neighbourhood is low, marshy, and neglected, and overrun, in many parts, with a luxurious profusion of heaths, myrtles, fan-palms, capers, and junipers: while, also, singular reptiles and insects abound.

From the extremity of the Current Islet, Cape Passaro (described on page 145) bears E. by N. [*N.E. by E.* ½ *E.*] distant 4 miles. The coast between is entirely bordered with a reef, one-third of a mile in breadth.

EMPRESS SHOAL, near Cape Passaro.—On the 17th of June, 1837, the brig *Empress* of Sunderland, from Catania to England, grounded on a shoal about 3½ miles from the extremity of Current Island, which bore from the ship E. by S. [*E.* ½ *N.*]. The spot where the ship struck appears to be the shoalest part of the bank, whereon was 13 feet of water. Its extent is small; and, from the vessel's having reached from the land two or three miles before she came to the ground, and being ultimately got off by being hove *toward the shore*, it cannot be the continuation of a shoal from the main land. After remaining aground seventeen hours, the vessel was, by discharging part of the cargo (sulphur), got off without sustaining any material injury.

3.—THE ISLANDS OF MALTA, GOZO, LINOSA, AND LAMPEDUSA.

GEODETIC POSITIONS.	Latitude N.				Longitude E.		
Cape S. Demitri, the N.W. end of Gozo	36°	3′	45″	..	14°	8′	0″
Cumino; East end of	36	0	15	..	14	19	40
Point Schilep, Malta	35	59	35	..	14	22	0
VALETTA; Lighthouse	35	54	6	..	14	31	10
Palace.....	35	53	55	..	14	30	50
Point Benhisa (S.E. point of Malta)	35	49	0	..	14	33	0
Filfola Rock; centre	35	46	30	..	14	28	30
Isle Linosa; Landing cove	35	51	50	..	12	52	9
Lampedusa; castle	35	29	19	..	12	35	10
Lampion Rock	35	32	47	..	12	19	50

MALTA.—Malta is celebrated for the magnificence of its capital, the grandeur, extent, and strength, of its fortifications, and its importance to England. This island has latterly become one of the greatest depôts of merchandize in the Mediterranean: and the natives have acquired habits of industry, and developed sources of profit, to which they were formerly total strangers. The Island lies between the latitudes of 35° 49′ and 35° 59′, and between the meridians of 14° 19′ and 14° 36′. Its easternmost point is 55 miles S.W. [*S.S.W. ½ W.*] from Cape Passaro, and 54 miles S. by W. ½ W. [*S. ½ E.*] from Cape Scalambra, in Sicily. From the point last mentioned, *Cape St. Demitri*, the N.W. end of Gozo, bears S.W. ½ S. [*S.S.W. rather southerly*], distant 46 miles. The passage between is that called the *Channel of Malta*.

The South coast is altogether cliffy and destitute of harbours; it is full of grottoes or caves; the rocks being, for the most part, craggy: but, facing the S.E. is a large bay, named *Marsa Scirocco*; and, on the N.E. side, at 4 miles from the easternmost point, (*Schawopologon,*) is the Grand Port of Valetta, the capital of the island. On the west of the latter, separated by a peninsula, on which stands the city and its fortifications, is another large port, called *Marsa Musceit*, or *Port Musset*, having, on its west side, a small island, near which all vessels from the Levant, or any other place suspected of contagious disease, perform quarantine.

At nearly two leagues to the north-westward of Marsa Musceit is an open bay, that of *St. Paul*, which faces the N.E.; and beyond this, on the west, divided from it by a peninsula, is the larger port or bay of *Melleha*, completely open to the N.E. These are the principal bays of Malta, but there are several smaller harbours, which have been accurately surveyed by Captain Smyth, as shown in his Atlas of Sicily, &c.

The Maltese islands are calcareous rocks, containing some petrifactions and concretions. This rock is mostly of a porous nature, and a great proportion of it is covered with earth, originally brought from Sicily, &c. Each season yields its peculiar crop, and, considering the nature of the ground, the produce is extraordinary. The colour of the soil varies in the different districts, and it is seldom more than one foot deep above the surface of the rock: in summer it is irrigated chiefly by the night-dew; but the rock, being porous, retains the moisture, and keeps the earth constantly fresh. The earth is always removed once in ten years, in order to clear the rock of a thick crust, which forms and prevents the moisture from sufficiently penetrating.* Necessity has taught the Maltese to make a sort of artificial land in the barren parts of the island. The process is laborious and expensive; but, with ordinary perseverance, it becomes, in time, equally fertile with natural land.

Malta and Gozo produce various fruits, of exquisite flavour, with excellent roots and very fine flowers; the roses, in particular, are described as more sweetly scented than those of any other country. These islands likewise yield great quantities of *cumino*, *aniseed*, *halimagnum*, *lorricella*, *silla*, and *lichen*; the last grows on the rocks exposed to the north, and is used for dyeing the amaranthus colour.

The gardens in Malta are numerous; especially toward the east: they are generally ornamented with groves of orange and lemon trees; but these are not permitted to grow to any height on account of the wind, which would blow off the fruit and break the branches. The greatest attention is paid to the orange trees, which are commonly watered twice a-day. The tops are trimmed into a round form, resembling an umbrella, and they grow on one single straight stem, as do likewise the lemon trees, the branches of which are sometimes suffered to extend till they form a kind of bower. These trees are almost all raised in tubs, and placed in the most sheltered spots. Kitchen-gardens have greatly increased in Malta, and produce cauliflowers, with other vegetables, of the finest quality. Water is constantly kept for their use, in cisterns hewn out of the rock, and trenches are dug around them to collect the rain. The finest fish is very abundant on the coast; and is, consequently, cheap.

Fertile, however, as Malta is, in many parts, it is far from being able to furnish its population, of more than 99,000 persons, with the necessaries of life, without foreign

* "Malta seems rather to have been intended for a quarry than a habitation of man; for it contains little else beside stone. In Sicily, every advantage has been lavished by nature, and none obtained by art. Here it is exactly the reverse; industry has raised splendid palaces and fruitful fields, where nature had laid down a rocky desert. The very hedges of the fields are masses of stone piled on one another."—*Turner's 'Tour in the Levant.'*

assist-

assistance.* The corn grown in Malta would not supply more than one-third of the inhabitants with bread, hence large quantities are imported from Sicily and other places.

The four seasons are regular and well defined. The spring is delightful, and accompanied with a sweet and temperate air. In the month of March, the sky becomes clear and serene, the clouds are dissipated, and there is seldom any fall of rain; during the greatest part of this season the wind remains in the north, but it begins to abate, and veers occasionally toward the east; the sea becomes calm, and the nights are extremely cool and pleasant. There are, during this season, some land and sea breezes, as well as in summer and autumn.

In June the heat is considerable, and it continues to increase during the whole summer. The winds are almost imperceptible, and for the most part in the east; the sea is then calm, and no country appears more delightful: the stars appear with the greatest lustre, and the atmosphere is unclouded, both by day and night.

In September the sky begins to be obscured by clouds; toward evening the atmosphere is charged with electricity, which produces frequent lightning, often attended with violent peals of thunder, and sometimes even slight shocks of an earthquake are felt. The South and S.E. winds, which, at times, prevail during this period, do not blow with much violence, but they are so loaded with humidity, and so hot, as to render the climate almost insupportable.

From December to March the sky is covered with clouds, and the rains are very abundant. The sea is in a constant state of agitation; and the winds are cool, and blow from the North, N.W., West, or N.E., with great violence.

The thermometer of Fahrenheit during the summer is generally below 88 degrees, and scarcely ever above 95. In winter it falls down to 48 degrees; but heat and cold are not most felt when the thermometer is at either of the two extreme points of temperature. The different directions of the wind produce an instantaneous change from cold to heat, and from heat to cold. North and N.W. winds always occasion cold; and a South wind constantly brings heat. A N.W. wind purifies the air in the greatest degree; a N.E. wind is not quite so pure, and it becomes infinitely less so when it changes to the S.E. or South; but it again becomes better when it veers to the S.W., particularly if the sea be much agitated.

The N.W. wind is purified by the vast expanse of sea which it passes over; but the North wind would suffer some degree of alteration from Italy and Sicily, if the great vegetation in those countries did not tend to purify the atmosphere. When the wind changes to the South it becomes dangerous, owing to its having passed over the barren burning continent of Africa, where there is scarcely any vegetation, and where the heat is so intense that every thing susceptible of rarefaction in the earth produces exhalations which enter into the atmosphere. It is not purified by passing over the sea, because the channel is narrow; and, being sheltered by the land, the water is not sufficiently agitated to absorb, by its motion, the mephitic miasmata with which the air is impregnated.

The extreme cold during winter is produced by the pure air which blows from the north. The winds then act with violence, and continually renew the volume of air. In summer, when the wind has prevailed from the S.E., the usual purity of the air is so greatly altered, that, were it to change a few degrees more, it would become exceedingly dangerous, and might even produce suffocation.

The south winds *(scirocs)* never blow long at a time, seldom lasting more than three or four days. They are frequently succeeded by a calm, during which the heat is also very great, but much less oppressive and suffocating, though the thermometer frequently shows a much higher degree of real heat. The air is then infinitely more pure; and the sea-breezes during the night, and, indeed, some part of the day, greatly refresh the atmosphere. This air is purified by passing over the water, which it gently agitates. There is, also, a morn-

* In 1632, the population of Malta and Gozo was 51,750. In 1798, Malta contained 90,000, and Gozo 24,000 inhabitants. Total, 114,000: a very extraordinary population, in proportion to the small extent of the islands.

Horses are rare in Malta; as beasts of burthen, asses or mules are chiefly employed. Goats are numerous, but there are few black cattle. The ox is brought either from Barbary or Sicily, and is fattened with the seed of the cotton, which renders the flesh delicate. The poultry consists mostly of the common domestic fowl and abundance of pigeons. Rabbits, also, abound.

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ing land-breeze, which, though less pure, cools the air in some degree. When the wind changes suddenly, from the south to the north, we here feel an astonishing lightness, our sensations are inexpressibly pleasant, and we breathe with the greatest freedom. It is a certain fact that, on these occasions, the air becomes much more pure, though there is no variation in the thermometer.

Nothing is more salutary, during the Scirocco, than iced beverages; they revive the spirits, strengthen the body, and assist digestion. Snow is, therefore, considered at Malta, as one of the first necessaries of life. It is brought from Sicily, and administered to the sick. Whenever there is a scarcity of this article, all that remains in the ice-houses in entirely reserved for the use of the hospitals.

MALTA contains two cities, and twenty-two *casals* or villages. The original capital being *Citta Vecchia*, the Old or Notable City, which still preserves, among the inhabitants, the name of *Mdina*, signifying City, and it is the seat of the Bishopric. Beside the cathedral, which is large and handsome, it contains several other churches, &c. The town is so elevated that from it may be seen the whole island, and sometimes the coasts of Africa and Sicily. The catacombs in this place have always been celebrated; they are very extensive, and contain streets in all directions, which are formed with such a degree of regularity, that they have been called the *Subterraneous City*.

In the craggy rocks around Malta and Gozo are many spacious caves or grottoes; into some of which, being on a level with the sea, the waves dash in, when in an agitated state, and resound tremendously. The mouths of others are at different heights, and the access is more or less difficult and dangerous according to their situation. One of the most considerable of those usually visited is situate near Point Benhisa, the S.E. point of Malta, and this extends more than 200 paces under ground. All these grottoes are full of *stalactites* and *stalagmites*, produced by the water's filtering through the calcareous rock. Another great curiosity of the same nature is the excavation *Makluba*, west of the casal or village of *Zurig*, half a league from the south shore.

GOZO stands much higher than Malta, and is entirely surrounded by perpendicular rocks: the highest are to the west and south, where they are tremendously steep. The opposite cliffs of Malta and Gozo are correspondent; but, though there are some valleys in the same direction as those of Malta, they do not afford any port of consequence, on account of the height of the land and its breadth. The country is not so uneven as that of Malta, consequently it is more easily cultivated; and it appears that the surface was, originally, nearly horizontal. The rock, however, is decidedly of the same nature in both islands, which are equally mountainous; some single, some forming chains, the summits of which are for the most part flat.

The pasture land of Gozo is fine, and great quantities of cattle are fed here for the use of Malta, with which there is a daily communication. The grapes of this island are particularly fine, and so highly esteemed by the Maltese, that they buy up the greatest part for their own particular use. Corn and cotton are cultivated with success: the air is particularly wholesome, and the country presents a variety of agreeable prospects. It contains six casals or villages. A castle stands on the summit of the island, and on its S.E. coast is another, *Fort Chambray*. The interior fortress stands on a solitary rock, of not more than 150 fathoms in diameter. This island seems to have been formerly adorned by many sumptuous edifices. In the heart of a mountain in the N.W., near *Zabug*, is a quarry of alabaster.

MARSAL FORNO, or *Forno Bay*, near the middle of the North coast, affords anchorage for small vessels, as does also the *Calle Ramla*, or Ramla Cove, one mile more to the east, and *Port Miggiaro*, on the S.E. side, where there are salt-works. At half a league from the latter, toward the S.W., is a small inlet or port, passing which, and by keeping at a little distance from the coast hereabout, it is impossible not to be struck by the variety of rocks, caverns, &c. Here is to be seen the famous shelf distinguished for producing the *Fungus Militensis*, or Maltese mushroom; and farther on is a coast, formed of caverns and vertical rocks, from 150 to 160 feet high, above the water: the same rocks are buried in the sea to a very great depth, but they are of so white a colour, and the water so transparent, that they may be easily distinguished, at a considerable depth, under the waves. Cliffs continue all round the western coast, but they are not so high as those of the south, and are broken in several places.

CUMINO.—The small and irregularly-formed isle of CUMINO, which lies between Gozo

Gozo and Malta, partakes of the character of Gozo. Its greatest length, from N.E. to S.W., is two miles, and its western (or rather N.W.,) side forms three small coves, the depths in which are 2 and 3 fathoms. There is a tower on the height at the south end; to the westward of which is the islet *Cuminotto*, with several rocks.

The two channels divided by Cumino are denominated the *Passages of Gozo and Malta*. Both are very good, and have from 12 to 20 and 30 fathoms of water. By keeping in the middle of either channel, you may find these depths, with fine sandy bottom.

ST. PAUL'S or BALL'S BANK.—A bank thus named, which is 3½ miles long, from N.W. to S.E., lies at half a league to the N.E. of the Passage of Malta, or the Channel between it and Cumino. It is more than a mile in breadth, and its depths are from 7 to 14 fathoms. Much of the ground is very good, but there are rocky patches, which may be readily seen with a water-glass. Here you may have a good winter anchorage; the passage between Malta and Cumino being open to run through, in case of being driven from your anchors by a N.E. gale, which is frequent here. The N.W. part of the bank is rocky, and particularly all soundings under 9 fathoms. The best marks for anchorage, in about 13 fathoms, are, St. Paul's Tower, in the Bay of St. Paul, over Salmonetta or Salmona Isle, S. by W. ½ W.; the University tower, near Kaura Point, S. ¼ E.; and the north point of Malta, W. ¼ N.

The N.W. end of the Bank, with 13 fathoms, lies with the northernmost point of Gozo N.W. by W., and the N.W. end of Cumino W.N.W. ¼ W. *The S.E. end*, with 14 fathoms, lies with the northernmost point of Malta W. ¼ N. 2½ miles; the church on Gozo nearly on with the north end of Cumino, W.N.W.; and St. Paul's Tower, over Salmonetta or Salmona Isle, S.S.W. ¼ W. From the depth of 7 fathoms, on the western part, the eastern angle of Citta Vecchia bears S. ½ W., and the tower on the island Cumino W.S.W. ½ W. This part is entirely dangerous; as it breaks with easterly and N.W. winds.

The open Bay of MELHEHA lies directly opposite to the eastern part of St. Paul's Bank; in the sea between are from 22 to 27 fathoms, with regular soundings inward to 3 and 2 fathoms; but there is a rock of 9 feet, in the middle of the bay, on each side of which are 5 and 6 fathoms. In this bay, at about W.S.W. ½ W. from the south part of St. Paul's Bank, is a valley, having a very fine spring of water, from which 20 tons may be procured every day.

The Bays of MELHEHA and ST. PAUL are divided by the peninsula of *Salmona*, on the elevated part of which is the *Salmona Palace*, a remarkable square edifice; and, at the extremity of this peninsula, is the low and irregular islet called Salmonetta, which forms the north side of St. Paul's Bay. At the eastern extremity of this islet, are a few rocks under water, extending outward to about half a cable's length: at a cable's length is clear ground, with 10 to 14 fathoms.

The distance between the eastern end of Salmonetta and *Kaura Point* is rather more than a mile, and the space between is the entrance of St. Paul's Bay. In this bay, at less than a quarter of a mile to the southward of Salmonetta, and extending a quarter of a mile thence S.S.E., is a bank of rocky and foul ground, on which the least depths are 7 and 6½ fathoms.

On the S.E. of the entrance, within Kaura Point, are the square tower and battery, called those of the *University*. Another battery, *Elbena*, stands on the same side, at three-quarters of a mile farther in; and, at half a mile westward of the latter, is the Tower of St. Paul. Three other batteries defend points of the bay.

The HARBOUR *of St.* PAUL is open to easterly and N.E. winds; it is, notwithstanding, safe for small ships, the ground generally being very good; and while the cables hold there is no danger, as the anchors will never start. The best anchorage is abreast the small harbour on the starboard hand going in, and in from 10 to 6 fathoms, soft mud and clay. Small ships may haul into the little harbour, and lash together in a tier, having an anchor out to the S.S.E., and no winds can hurt them.

Between St. Paul's Harbour and Valetta, (about two leagues S.E. ½ S.) the ground is, in general, rocky and bad; though there are spots of clear ground. With the two towers of St. Paul's Bay in a line, W. ½ S.; St. George's Tower, S. by W.; and the extremes of the land of Gozo and Malta, from N.W. to S.S.E. in 32 fathoms, with coarse sand, is the safest spot for anchoring, and the clearest ground.

At half a league S. ¼ E. [*S.S.E.*] from the above-mentioned spot, and at rather more than half a mile from shore, is the west end of *St. George's Shoal*, a rocky bank extending thence a mile to the south-eastward. The depths over it are from 4 to 7 fathoms, and it lies directly off the little port of St. George, distinguished by the tower already noticed. Eastward of this port, at less than one quarter of mile from shore, is the *Spinola Reef*, lying off the entrance of St. Julian's Bay, off which anchorage may be found, but it is all in patches. Half a league south-eastward from St. Julian's Bay is the round tower of St. Elmo, or Valetta lighthouse.

VALETTA.—Marsa Musceit and the Porto Grande, or Great Port of Valetta, are, as already noticed, separated by a rocky peninsula, or tongue of land, on which stands the city, with its suburb *Floriana*. At the extremity is the lighthouse, on *Fort St. Elmo*, which serves to defend the entrance into both ports. On the south side of the Great Port are two other peninsulas of rock, pointing toward Valetta, and forming inlets, which serve as excellent harbours. On the first of these are the Castle of *St. Angelo* and town of *Vittorioso*; on the second the town of *Isola* or *Sanglea*; and southward of both is that of *Burmola*, surrounded by the fortification called the *Cotonera*.

The inlet on the eastern side of Vittorioso is the *Porto della Renella*; that between Vittorioso and Sanglea, *Port della Galera*, the *Galley Port*; that on the west of Sanglea, *Porto dell' Isola Sanglea*, or Port of the Isle of Sanglea.

The promontory which forms the north side of Marsa Musceit, as St. Elmo and Valetta form the south side, is named *Point Dragut*, and exhibits, on its extremity, *Fort Tigné*, which defends that harbour. Over the south point of the entrance to the Grand Port, *(Punta del Orsa,)* is the more extensive fort *Ricasoli*.

The first stone of the present capital, *Valetta*, was laid by the renowned Grand Master La Valette, in 1566. The houses are neat, built of stone; the roofs form a flat terrace plastered with pozzalana, with pipes conducting to cisterns, so that all the rain water is preserved. The church of St. John, on the S.W. side of the city, is one of its principal ornaments, and St. John's day is one of its highest festivals.

The approach to the harbour of Valetta is exceedingly picturesque and interesting; and the fortifications, close to which every ship has to pass, seem sufficient to annihilate the most powerful naval force that could be brought against it. In coming from the eastward and northward, as you approach, you will see the round light-tower of St. Elmo,* standing over the point between the two harbours, and which, at first, appears like a sail. You will also see white cliffs, with a white church, near the S.E. end of the island.

Without the harbour, off Valetta, is very deep water, but fine soft mud and clay; depths from 80 to 60 fathoms.

The Harbour of Valetta is large, safe, and commodious. The entrance is no more than 250 fathoms wide. Two warping buoys lie without the entrance, between which is the fair channel for the largest ships. From the point of St. Elmo there is a little foul ground, to the distance of 50 fathoms, and a spit stretches thence eastward about 170 fathoms, having over it from 4 to 7½ fathoms. The extremity of the shoaler part is indicated by a can-buoy, within which, in a heavy sea, a line-of-battle ship would strike.

There is also a small reef, of 17 feet, on the eastern side of the entrance, which extends about 20 or 30 fathoms from *Punta del Orsa*. It has 5 fathoms close to it.

The leading mark in is, the stone sentry-box on Point Sanglea open to the southward of the whole of the Valetta side. Should the wind be scant, or out of the harbour, you may anchor any way off the entrance, in 15 to 20 fathoms, and warp in. The entrance is so narrow, and the wind, in general, so variable, without the harbour, as renders it not adviseable to attempt to turn in. It may be proper for strangers to take a pilot; as one may always be obtained, on making the usual signal when off the harbour.

In sailing in, keep nearest to the western shore, as it is bold-to, and not subject to sudden gusts of wind, like the opposite shore. The best anchorage is all along the same shore, from the Pratique Office upward to Floriana, with one anchor to the southward and a fast on shore.

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* The Tower now presents an improved and brilliant light, which may be seen more than eight leagues off. A view of the point is given on the new chart.

There

There is good anchorage in *Bighi Bay*, the first bay within Fort Ricasoli, in the summer months; but, as it is exposed to the north winds, which send in a very heavy sea, it would not be adviseable to lay there in winter. In the middle of the harbour, off this place, is a warping buoy.

The best anchorage for men-of-war is above Sanglea Point, in the Inner Harbour, with that point bearing East, and the dome of Floriana church N.W., or N.W. by N., in 10 or 11 fathoms of water. Moor with the small bower to the N.W. and the best bower to the S.E., so as to have an open hawse with the wind in.

Water may be had in any quantity. You fill it in boats, with a hose alongside the wharf, from pipes laid down for the purpose. Wood may be purchased, but it is very dear, as most of it is brought from Sicily.

It is no less curious than amusing to view the diversities of dress and appearance among the motley crowd which business daily assembles on the marina of Valetta. Beside the English soldiers, sailors, and merchants, many of whom have their warehouses there, one sees Barbaresque traders, wrapt in their long shawls and peculiar habiliments, whose settled gravity is contrasted with the noise of the Maltese boatmen and porters, a lively set of people, having much more of the Italian than the African character, although some of them evidently appear to be of the latter origin. There are, also, about the harbour, some Maltese of a superior class, such as the port-captains, the officers of the *sanità*, and others, who imitate the English, but may be readily known as Maltese by their swarthy countenance, &c.

MARSA MUSCEIT, the harbour on the N.W. side of Valetta, is made use of for ships to perform their quarantine in. Manuel Island, on its western side has a fort and lazaretto upon it; the latter being on the south side of the island. The entrance of this harbour, defended by *Fort Tigné*, is only 150 fathoms wide, and there is a narrow reef, of 2 and 2½ fathoms, around Point Dragut, on the north side. To avoid the reef, on entering, keep Fort Ricasoli open of Point St. Elmo until you open Fort Manuel or the Lazaretto Island: then, if the wind be fair, steer in for the S.E. point of that island, or keep in mid-channel, passing a warping buoy, which lies in the entrance. The starboard side, in going in, is generally steep-to, but some shoal spots stretch off from the larboard side.

If the wind be scant, or out of the harbour, anchor off the entrance in 14 or 15 fathoms of water, and warp in. Guns or stones are fixed along both sides, to which hawsers may be made fast. The best anchorage is above Lazaretto Island. Moor with the best bower to the eastward, and the small bower to the westward. There is not width to moor athwart the harbour, with more than half a cable each way. Merchantmen moor with an anchor a-head and stern-fasts on shore. There is a watering place on the Valetta side, nearly opposite the lazaretto, for the ships in quarantine. The Pratique Office is on the point opposite to Fort Manuel.

To the SOUTH-EASTWARD of VALETTA, without the harbour, the ground is pretty good, in from 40 to 22 fathoms; but off the little harbour called *Marsa Scala*, at the east end of the island, the bottom is rocky, and between this and Marsa Scirocco there is no safe anchorage.

At E. ½ S. from Valetta there is good ground in about 58 fathoms of water, on muddy bottom; also off Marsa Scala, in from 35 to 60 fathoms.*

On the south side of the entrance of Marsa Scala is the castle or fort of St. Thomas. The coast thence forms a small bay, to the S.E. terminating with the white cliff. From the cliff a reef extends due East (by compass) two miles, and is one quarter of a mile in breadth. The depths over it are from 5 feet to 9 fathoms, and it is steep-to on both sides, having 17 fathoms close to it, and at the next cast shore. The marks for it are, a windmill, the only one in sight, on with the south end of a house behind which it stands: this is the thwart mark, showing the lateral direction of the reef. The long mark for the

* HURD'S BANK.—At 3½ leagues E. by S. [*E. ¼ N.*] from Valetta lighthouse, is the south end of a bank, surveyed and named, by Captain Smyth, *Hurd's Bank*. It extends *true* N.N.E. and S.S.W. more than three miles, and is generally one mile in breadth. The southern part is rocky, and has over it from 27 to 31 fathoms of water. The northern part, of gravel, has from 17 to 40 fathoms.

outer

outer extremity of the shoal is a little square house on the side of a hill, bearing N.W. on with the southernmost of three towers which appear nearly in a triangle, when in that direction.

Ships coming round from the eastward for Valetta, should give a wide berth to this sheal.

MARSA SCIROCCO.—*Benhisa Reef*, a dangerous shoal, lies off *Point Benhisa*, the S.E. point of Malta. To the northward of this reef and the point is the bay called Marsa Scirocco. This bay is formed on the east by an elevated peninsula, named *Vermia*, which terminates with *Point della Mare*, at the foot of which is an islet, *Limace*, and some rocks, *Itactia*, all bordered with a rocky shoal. Benhisa Point bears W. by S. a mile from Point della Mare, and is distinguished by a square tower. Della Mare has also a square tower and a battery.

Seated on a broad promontory, directly facing the mouth of the harbour, is the square castle of St. Lucian, which, bearing N. by W. [*N.N.W.* ½ *W.*] forms an excellent mark for the mid-channel, into and out of the harbour, between the shoals on either side.

From the square tower on Benhisa Point the outer end of Benhisa Reef bears S.S.E. ½ E. [*S.E.*] one mile. The depths over the reef are from 3 to 9 fathoms. The depths around it are from 10 to 20 fathoms.

This reef is rugged and uneven. The thwart mark is Zeitun church (with two spires and a cupola) bearing N. by W. and on with the N.E. end of the castle of St. Lucian. The outer end lies with a broken-headed tower, bearing N.N.E., on with the Tower del Mare, which stands on the eastern point of the harbour.

In entering the harbour from the N.E., do not shut in these marks with each other; and on approaching from the S.W. keep the last or long mark well open until Zeitun church is a sail's breadth to the northward of St. Lucian's Castle, which will carry you clear.

Marsa Scirocco is a very safe harbour, except with southerly winds, and even they seldom blow home. The bottom, in general, is good holding ground, with from 5 to 15 fathoms. The N.E. side is the safest for any ship to anchor on. Line of battle ships may anchor outside, in any place to the north-eastward of the shoal, or at about half a mile from it, where there is a depth of 20 to 22 fathoms.

Benhisa Point is shelving, and this renders the passage between it and the reef not safe for large ships, there being only between 3 and 4 fathoms of water at a cable's length from the point. No man-of-war should take this passage unless in a case of necessity, (which can rarely happen,) and should then borrow nearer the outer shoal than the point; not drawing toward the point under 6 fathoms. The Reef keeps off much of a sea with a southerly wind.

SOUTH COAST.—There is no good anchorage on the South and S.W. sides of Malta; and, at any distance off, there are 100 fathoms of water and upward, all the coast being steep-to, with exceedingly high and rugged cliffs, as already described.

At half a league from the middle of the South coast is a remarkable islet named *Filfola*. It is a high rock, a mile in length, from East to West, and having, at its west end, the two smaller rocks of *Santa Maria*. Between it and Malta the depths are from 27 to 37 fathoms. The tide hereabout is scarcely perceptible, but the current is mostly to the southward and eastward.

TRADE AND QUARANTINE REGULATIONS OF MALTA.

Valetta, &c.—*Trade of Malta*, 15th January, 1819.—"The duty of one-half per cent. heretofore levied on all goods exported from this island is abolished, and vessels' manifests outward no longer required.

"Vessels putting in here, either through stress of weather, or for information, may remain 48 hours without being obliged to deliver up their papers, and are at liberty to sail again within that period, subject only to the payment of one tarì per ton for anchorage-dues, and for water if required. Vessels intending to avail themselves of this privilege, are directed to come into the Quarantine Harbour, but are not on that account subjected to any further charge.

"The Excise Import Duty on Rum, the produce of the colonies and possessions of Great Britain is taken off. The quarantine charges are also reduced."

MALTA,

MALTA, 20th of April, 1826.—"The Board of Health has resolved that men-of-war shall, in future, ride out, in the quarantine-harbour, the whole period of quarantine established against the place from which they may come, not deducting, as heretofore, the days of the voyage. It is considered by the Board that the observance of these conditions will lead to no public inconvenience, not fully compensated by the advantages which will result to the trade of Malta; for it is supposed that this resolution of the Malta Board of Health will obviate the objections upon which the principal Mediterranean States have heretofore declined to admit into their ports vessels from Malta, on the same terms upon which admission is granted to vessels coming from their respective ports. The Board has also established quarantine against Gibraltar, Spain, the West Indies, and the continent of America, the period of which will be regulated by circumstances."

14th June, 1826.—"An official communication has been received from the Board of Health at Genoa, intimating that free pratique will be granted to all vessels arriving from Malta; and it is expected that communications equally satisfactory will shortly be received from the respective Boards at Marseille, Leghorn, and Naples. The benefit that will accrue to the commerce of this island from free pratique with the continent, there is every reason to believe, will be found equally advantageous to the continental ports trading with us; and, considering the great local superiority of our lazaretto, insulated and surrounded by a spacious harbour solely devoted to quarantine purposes, with a most efficient quarantine establishment, certainly no place can be better entitled to free pratique, or to greater confidence, than Malta.

"The resolution of our Board to place men-of-war on the same footing as merchant-vessels, with regard to quarantine, has been of much service, and this resolution is most strictly adhered to. His Majesty's ship Zebra, which arrived here lately from Smyrna, after a passage of thirty-one days, notwithstanding that she had no communication during her voyage, and that the most perfect health was enjoyed by all on board, was ordered to perform thirty days' quarantine: in fact, our Board has resolved to enforce, on all occasions, the most rigid system of quarantine."

Malta.—30th August, 1826.—"Official despatches have been received from the authorities at Leghorn, intimating that all vessels arriving in that port, with clean bills of health from this island, will be admitted to immediate pratique.

"The Board of Health of Leghorn, in thus following the course pursued by those of Genoa and Marseille, must be fully convinced of the efficacy of our quarantine regulations, and of the inflexibility and integrity of our newly-established Board of Health.

Sept. 20, 1826.—"Dispatches have been received from the Board of Health at Palermo, containing similar information, that departures from our port with clean bills of health will be admitted immediately to free communication in all the ports of Sicily. The concurrence of the Neapolitan government in the correct view which the other European states have taken of our insulated situation, and of the peculiar aptitude of our island for quarantine purposes, crowns with final success the hopes and expectations of all."

The following table of dues, authorized to be levied for account of the Government of Malta in the quarantine office, was officially published in the *Malta Gazette* of the 20th of January, 1830:—

"*Ships in Quarantine.*—Entrance Fee for every vessel arriving with a clean bill of health.

	£.	s.	d.
Not exceeding 50 tons	0	16	8
Above 50 and not exceeding 100 tons	1	5	0
Above 100 and not exceeding 150 tons	1	13	4
Above 150 and not exceeding 200 tons	2	1	8
Above 200 tons	2	10	0

"And every such vessel, in addition to the above respective rates, for guards and guard-boats, per day, 4*s.* 2*d.*

"N.B. 1. Vessels arriving with a foul or touched bill of health to pay double the above rates respectively, and all vessels arriving from Turkey in Europe, Anatolia, Karamania, Syria, Egypt, Cyprus, Candia, Morea, and all their adjacent islands, are to be considered as with a touched bill of health, when the plague does not exist in any of the above-mentioned places.

"2. Vessels subject to a quarantine observation of five days, or under, are only to be charged with the pay of the Guardian at the rate of 2*s.* 6*d.* per day.

"3. Vessels waiting for order or convoy, and performing no mercantile operation, and neither landing, trans-shipping, nor receiving on board passenger or baggage, are exempted under Proclamation No. II. 1828, from the payment of Health Office dues, and during their stay in the Quarantine Harbour are to be charged only with 3*s.* 4*d.* per day.

"Boats

"Boats employed in the Coral Fishery are chargeable with only 1*s.* 8*d.* per day each, besides the pay of the necessary guardians at 2*s.* 6*d.* per day each.

"*Effects undergoing Quarantine.*—1. A duty of half per cent. *ad valorem* shall be levied on goods brought by vessels performing above five days' quarantine and under 10, but on such portion only of the cargo as may be landed in Malta, whether in deposit or not.

"2. The said duty shall be levied on all goods brought by vessels performing 10 days' quarantine and upward, whether admitted to *pratique* on board, landed, or trans-shipped, excepting, however, cotton wool exported for England after depuration: and all goods received into the lazaretto for depuration shall be chargeable with a due proportion of the actual expences thereof, viz. at the rate of 2*s.* per day for one guardian, and 1*s.* 8*d.* for each labourer that it may be necessary to employ.

"*Cattle landed in the Lazaretto to pay as under:—*

	s.	*d.*
1. For each horse, mule, or ass	5	0
2. For each bullock	2	0
3. For each sheep, goat, pig, or other small animal ..	1	0

"*Persons performing Quarantine in the Lazaretto.*

For each apartment occupied—Entrance fee	16	8
Secondly, for guards, per day.....	2	6
Certificates or extracts under the office seal.....	4	2

The Islands LINOSA, LAMPEDUSA, and LAMPION.

LINOSA.—The uninhabited isle Linosa lies at about 67 miles S.S.E. [*S.E.* ½ *S.*] from Pantellaria, *(described on page* 147), and 60 miles W. ½ N. [*W. by S.*] from Cape St. Demitri, the N.W. extremity of Gozo. Linosa is of an irregular quadrilateral shape, about 6 miles in circuit, entirely volcanic, with an extinct crater within half a mile from its N.E. side, and three others more to the southward. The fires of these, Captain Smyth has observed, must have been very intense, as pumices and the most perfect and obdurate vitrifications occur amongst the lavas. There are three hilly ranges, with good valleys between them, covered with a spontaneous and varied vegetation, evincing, by a rich luxuriance of growth, the capability of the soil. On the western side is a small cove, formed by the falling in of one side of a crater, where boats can very conveniently land on a beach of fine triturated sand. The latitude of this cove is 35° 51′ 50″; its longitude 12° 52′ 9″. Variation in 1815, 16° 42′ 40″ W.

Linosa is moderately high, and in clear weather may be seen at the distance of 10 or 12 leagues. On making the island from a distance, it has the appearance of two islets; but, on closing, the hills and valleys are raised. The approaches are bold on all sides, carrying from 20 to 10 fathoms, close in, 50 to 60 at the distance of a furlong, and 150 at the distance of less than half a mile. The S.E. point *(Strepito)* is high and bluff; the S.W. *(Sciarazza)* low and craggy. The bottom on the east and west sides is of black sand.

The sea between Pantellaria and Linosa, also thence to Malta and to Lampedusa, is without bottom at the depth of 300 fathoms.

LAMPEDUSA, a dependency of Sicily, lies at the distance of 24 miles, S.W. ½ W. [*S.W. by S.*] from Linosa. This island is 6 miles in length, true East and West, by the medium breadth of half a league. Its surface is level, but its coast is abrupt and craggy, except on the S.E., where it shelves from a height of nearly 400 feet to a low shore, indented, or rather serrated, with many coves.

This island is not regularly inhabited, though an attempt to establish a settlement on it has been made. The western parts are covered with dwarf olives, and a great variety of plants, so that a good deal of fire-wood has been cut and sent hence to Tripoli and Malta. In this part of the island are plenty of wild goats. The Numidian crane visits the island in great numbers, in the month of May, and has proved to the only farm on the isle a very destructive enemy.

The north coast is very steep-to, having 35 and 40 fathoms within 400 yards of the shore; but from the south side extends a bank, having over it from 15 to 50 fathoms. Here good anchorage may be found, by bringing an old tower on the island to bear N.E. ½ E.

N.E. ½ E. [*N.E. by N.*] where you may find 17 or 18 fathoms of water, with gravelly sand: but there are hereabout two or three spots that may chafe the cable; so that an iron chain, if one on board, had better be let go.

Cape Ponente, the west cape, is a steep, picturesque, and perpendicular, cliff, which may be rounded by any ship at the distance of a furlong. On the south side of the island, at 2½ miles from this cape, are an islet and two rocks, the *Rabbit* and *Coneys*, which lie exactly half way between the cape and harbour. The larger Coney is moderately high, but the western very low, and this appears so exact a continuation of the white cliffs of Lampedusa, that it is difficult to make it out in passing; but all is bold-to. The Rabbit and Coneys should, however, be approached with caution.

Lampion.—At 8 miles N.W. by W. from Cape Ponente, the west end of Lampedusa, is the steep, tabled, and triangular rock, called *Lampion*. This islet is not above 400 fathoms in length, from North to South, by about 400 in breadth. Its surface is so flat that, on making it from the N.W. it looks like a wall, and yet there are vestiges of buildings on its summit, of an antient date. It is quite steep on its west, N.E., and S.W., sides, in cliffs of from 120 to 140 feet high, shelving down on its eastern side to a low point, much frequented by seals. All sides of it are bold-to, with 10 to 20 fathoms close in, excepting at the Seal point, whence a shoal tails off to the distance of about a furlong. In the sea around the depths are from 20 to 50 fathoms. The position of this islet is, lat. 35° 32′ 50″, long. 12° 19′ 50″. Variation, 15½° W.

X. The IONIAN SEA, from Cape Spartivento to Brindisi, with the opposite Coast and the Ionian Islands; including General Remarks *on the Navigation of the* Archipelago.

GEODETIC POSITIONS.

The S.E. Coast of Italy.	Latitude N.			Longitude E.		
Cape Spartivento	37°	55′	45″	16°	3′	15″
Bruzzano Point	38	2	40	16	9	20
Punta di Stilo	38	29	20	16	37	15
Squillace	38	48	30	16	27	0
Cape Rizzuto	38	56	0	17	0	0
Cape Nau or Colonna	39	4	50	17	13	45
Cotrona	39	7	30	17	8	55
Strongoli	39	17	0	17	6	0
Punta del Alice	39	24	15	17	15	25
Punta del Tronta	39	35	0	16	50	0
Roseto	39	58	0	16	34	0
Taranto	40	26	0	17	16	0
Gallipoli	40	3	0	18	4	0
Cape Santa Maria di Leuca; Church	39	47	54	18	22	55
Guardia Collina; Signal	39	48	50	18	21	21
Gagliano; Comi House	39	50	38	18	23	15
Specchia Grande; Tower	39	52	53	18	24	29
Castro; Tower	40	0	26	18	26	26
Cerfignano; Telegraph	40	2	48	18	29	12
St. Nicolo di Casole	40	7	20	18	30	45
Otranto; Telegraph	40	8	46	18	30	29
Torre dell' Orso	40	16	35	18	26	46
Specchia Ruggieri; Tower	40	19	47	18	23	27
Lecce or Lecche; Steeple	40	21	14	18	11	6
Torre Rinalda	40	29	2	18	11	4
Torre Mattarelle	40	35	15	18	4	0
Brindisi; Fort de la Mer	40	39	27	17	58	59
Torre di Penna	40	41	11	17	57	7

Coast

GEODETIC POSITIONS, *continued.*

Coast of Albania.	Latitude N.				Longitude E.		
Durazzo; Highest Mole	41°	17′	32″	..	19°	26′	44″
Cape Lachi or Laghi; Tower	41	10	10	..	19	25	29
Sasseno or Sasena Isle	40	29	10	..	19	14	21
Aulona; Custom-House	40	27	15	..	19	26	20
Port Palermo; Castle	40	2	55	..	19	48	10
Cape Kiephali	39	55	40	..	19	53	30

The ITALIAN COAST.

From Cape Spartivento, (see page 120,) at the distance of 42 miles N.E. ¾ E. is the *Punta di Stilo* or *Point Stilo.* The land between forms an irregular concavity; it has several small towns, villages, and towers, near the coast, but no harbour or anchoring place, except with off-shore winds, and the water is very deep close to the shore. The Point or Cape Stilo is the S.W. point of the Bay or Gulf of Squillace, of which the N.E. point is *Cape Rizzuto;* the bearing and distance between are N.E. ¾ E. [*N.E. ¾ N.*] 34 miles. There is no harbour or place of shelter in any part of this bay except with off-shore winds. Its principal town is *Squillace,* [ant. *Scyllacium,*] in lat. 38° 50′, which is 7 leagues to the northward of Cape Stilo, and finely situated on the rivulet *Favelona,* at a league from the sea. It was nearly destroyed by the earthquake of 1783, and has sunk to comparative insignificance.

From Cape Rizzuto [ant. *Iapygumtria*] to Cape Nau or Colonna, the bearing and distance are N.E. by E. ½ E. [*N.E. ¼ E.*] 14 miles. Nearly midway between is the point *Cimiti,* in the same line of direction. Cape Rizzuto is a low point of land, but it has a light tower upon it, which may be seen at a great distance, appearing like a sail. Cape Nau is also distinguished by a tower, and has a rock at its base.

CROTONA.—At 5 miles to the N.W. of Cape Nau is the port of Crotona, once celebrated for the school of Pythagoras, but now a poor town of 5000 inhabitants, in an unhealthy situation: its exports are cheese and corn. It has a little imperfect harbour, but vessels generally lie in the open roadstead.

The Punta del Alice [ant. *Crimisa*] lies 17 miles N. by E. ½ E. [*North*] from Crotona. The coast between, like the former, is entirely exposed. The little town of *Strongoli,* which is half a league in-land, is 11½ miles from Crotona.

GULF of TARANTO.—The extreme points of the Gulf or Bay of Taranto are Punta del Alice and *Cape Santa Maria di Leuca,* [ant. *Iapygium.*] The bearing and distance between are E. ½ N. [*E.N.E.*] 62 miles. No part of the western shore of this gulf affords any harbour or place of shelter for a vessel with the wind blowing on shore; but the coast has many villages, watch-towers, and small rivers, as represented on the Charts.

At 19 miles N.W. by N. [*N.W. ½ W.*] from Punta del Alice is Punta del Tronta; and, at 25 miles from the latter, N. by W. [*N.N.W. ½ W.*] is *Cape Spulico:* two miles beyond which is the little town of *Roseto.*

Taranto, the ant. *Tarentum,* stands at the distance of 43 miles N.E. by E. ½ E. [*N.E.*] from Cape Spulico. This famous city had once an excellent port, now choked up from neglect. It contains, at present, about 18,000 inhabitants, and is noted for its fisheries. It has a fort of some strength, and is connected to the main by two bridges. At the back of the town is an extensive lake, the *Mare Piccolo;* and directly before it, at the distance of a league, are the Isles of *S. Pietro* and *S. Paolo:* the space between is the *Mare Grande,* or Great Bay. This bay has, therefore, three entrances, and of these the southernmost is the largest and best. This entrance is two miles wide, and lies between the Isle of S. Paolo and Point St. Vito, which is to the S.E., and has a watch-tower on it. The channel has from 14 to 16 fathoms of water. In that between the islands, which is narrow, are only 3 and 4 fathoms. On the N.W. point of the harbour is a tower, *Rondinella,* and in the channel between this and the Isle S. Pietro, are from 5 to 3 fathoms, but it cannot be recommended to a stranger.

The Cape and Tower dell' Ovo stand at 6 leagues S.E. ½ E. [*E.S.E.*] from Punta di S. Vito: and, at 26 miles from the latter, is Gallipoli, (ant. *Callipolis,*) which is situated on

on an island, connected to the main by a bridge. Before it is the isle S. ANDREA, with its light-tower, and several small islets, and the port lies between. The town contains about 8,000 inhabitants, and exports considerable quantities of oil and cotton. Between the Isle S. Andrea and the inner islets are 7 and 8 fathoms of water; and more to the north are from 6 to 13 fathoms. To the westward of the latter is a good road, where you may lie sheltered from S.W., S.E., and N.E., winds. If you would go into the road, and ride before Gallipoli, you must proceed without the islands, and come to an anchor before the town, in from 10 to 12 fathoms, the light-tower will then bear about W.S.W., and you will be within shot of the castles. You may not approach nearer than gun-shot of the town, as there is, within that distance, a shoal and rocky bank: but, if requisite, you may sail between the isles.

From the island of S. Andrea a bank extends two miles to the West and N.W., upon which the depths are from 6 to 12 fathoms. Near its edge the water quickly deepens to 50 and 54 fathoms. The little port and tower of *Cesareo*, about which is a sand-bank, lies four leagues to the northward of Gallipoli. The soundings between are regular; from 35 to 20 fathoms, and the ground generally clean.

The CAPE of SANTA MARIA DI LEUCA, or *Cape Leuca*, is 8 leagues, south-eastward, from Gallipoli. The coast between forms a convex line, facing the S.W., and there are several shoals about it; more particularly a long flat, of two leagues in breadth, stretching from shore, having on its outer edge 20 fathoms, and only 4 at two miles from the shore. Near the southern edge are two sunken rocks, (*Cavallo* and *Giumenta,*) nearly 3 miles from shore, at 11 miles westward of Cape Leuca. These must, of course, be carefully avoided.*

CAPE OTRANTO, the easternmost point of Italy, bears N.N.E. ½ E. [*N. by E.*], 7 leagues from Cape Leuca. The coast between is completely exposed and is protected by numerous towers. The port of OTRANTO is three miles more to the N.W., and here a vessel may lie sheltered from S.W. and South winds; but a northerly wind blows right in. The city of OTRANTO is small; it has a castle, on a rock, commanding the haven, which admits vessels of 150 tons, and is a place of some trade.

From Cape Otranto to Point Orso, the course and distance are N. ¼ W. nearly four leagues. The coast between is irregular, and the bottom generally sandy, with soundings of 50 fathoms, at a league from shore. From Point Orso to the *Cape* and *Tower* of *Cavallo* the course is N. by W. ¼ W., and the distance 26 miles. Between these points the coast is generally clear and the bottom sandy, but there are some rocks near shore. The castle of *S. Cataldo* is at four leagues from Point Orso, and at nearly equal distances between this and Cape Cavallo, four towers protect the coast.

BRINDISI.—At two leagues N.W. ¼ N. from the extremity of Cape Cavallo is *Cape Gallo*, and between are the town and port of *Brindisi*, the *Brundusium* of the antients. This was once a celebrated port, and that from which the Romans usually crossed in their way to Greece; mostly at *Dyrrachium*, the modern *Durazzo*. Both places were noted by the contests of Cæsar and Pompey. Brundusium was once the best harbour on this side of the Adriatic; but, in the 15th century, the Prince of Taranto sunk some ships in the middle of the passage, to prevent his enemies from entering, and thereby formed a resting-place for sea-weeds and sand, an accumulation of which has choked it up. Stagnant water, at last, produced a pestilence, and carried off two-thirds of the inhabitants. The city is now said to contain about 8,000. A castle, on an islet, in the middle of the bay, defends the harbour.

Cape Cavallo, to the eastward of Brindisi, is a neck of land surrounded by rocks, and within it are the islets named *Petagne*, behind which a vessel may anchor, in from 4 to 6 fathoms, sheltered from westerly winds. On entering, you may pass close to the eastern side of the Castle islet; but, having passed the castle, keep over toward the western shore, and anchor in 5 or 6 fathoms.

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* *Bearings and distances from Cape Leuca.*—To the North end of the *Isle Sassena*, at the entrance of the Gulf of Vallona, N.E. by E. [*N.E. ¼ N.*], 58 miles. To the North end of the Isle *Fano*, E. by S. [*E. ¼ N.*], 43 miles. To the castle of *Santa Maura*, on the north side of Leucadia, S.E. ½ E. [*S.E. by E. ½ E.*], 122 miles. To the *S.W. point of Cephalonia*, S.S.E. ½ E. [*S.E. a little southerly,*] 127 miles.

The ALBANIAN COAST.

CAPE LINGUETTA, as shown by chart, is the promontory forming the western side of the Gulf of Valona. From the extremity of this Cape the coast trends S.E. by S., and S. by W. 8 miles, to the *Valle del' Orso*, a small but deep cove, having a depth of 10 fathoms. From this spot the coast again continues high and steep, 5½ leagues, rounding to the south-eastward, and then forms a white sandy break or inlet, called the *Strada Bianca;* lying in latitude 40° 9½′, and longitude 19° 33′. At 2 leagues more to the eastward is *Chimara*, exhibiting high mountains, inhabited by a few Albanian shepherds, who dwell in the natural caves of the rocks. *Port Varzi*, a small bay, open to the S.W., with deep water, lies at the distance of a league more to the eastward, and from this the more important harbour, *Port Palermo* [ant. *Panormus*] is S.E. by S. distant one league. From the entrance of Port Palermo to the extremity of the promontory named Cape Kiephali, the bearing and distance are S. by E. ¾ E. [*S.E. by S.*] 10 miles, and the land is highly mountainous, with numerous ravines. A similar coast continues, to the village of *Santi Quaranta* or *Agioi Sarento* [Forty Saints] which is two leagues more to the S.E.

The people of this country, *Chimara*, [ant. *Chaonia*] called *Chimarotes*, are chiefly Mohammedans, and are ranked among the most warlike and barbarous of the Arnauts; but they exchange (mostly at Port Palermo) the produce of their valleys and mountains, consisting of olives, maize, gall-nuts, and timber, for arms and other necessaries.

BUTRINTO.—At 10 miles to the southward of Santi Quaranta are the remains of *Butrinto*, standing on the eastern coast, within the Channel of Corfu. The shallow lagoons existing here are productive fisheries, and most of the inhabitants are professedly Christian. To the south-eastward of Butrinto, and forming the eastern side of the Channel of Corfu, is the district of Philathi, the chief ports of which are *Gomenizza*, *Karaka*, and *Saiada;* these supply Corfu with cattle, sheep, and oil, which are abundant in the neighbouring territory.

The IONIAN ISLANDS, &c.

GEODETIC POSITIONS.

Ionian Islands and Western Coast of Greece.	Latitude N.				Longitude E.		
Isle Fano; N.W. Point	39°	52′	15″	..	19°	19′	15″
Isle Merlera; Centre	39	53	15	..	19	31	40
Samothraki; N.W. Point	39	46	30	..	19	27	0
Corfu; Cape Drasti	39	48	0	..	19	38	0
Tignoso Lighthouse	39	48	0	..	19	57	20
Cape Bianco	39	21	0	..	20	7	0
Citadel Lighthouse	39	37	0	..	19	56	0
N.W. Cape	39	13	20	..	20	9	0
Paxo; Gayo Lighthouse	39	11	30	..	20	12	20
Anti Paxo; Point Novoro or S.E. End	39	8	30	..	20	15	45
Parga; the Fort	39	16	15	..	20	23	30
Amouna Point	39	12	10	..	20	30	30
Kastrosikia; Point	39	5	20	..	20	38	0
Mitika; Point	39	0	0	..	20	42	0
Previsa or Prevesa; Fort at S. End	38	56	30	..	20	46	20
Leucadia or Santa Maura:							
Castle of Sta. Maura	38	50	15	..	20	43	0
Rock Sesola	38	42	0	..	20	32	30
Cape Ducato	38	33	30	..	20	32	45
Point Lypso Pyrgo	38	34	40	..	20	38	45
Arkudi; South Point	38	32	15	..	20	43	0
Kastus; South Point	38	32	15	..	20	54	30
Atoko; North Point	38	30	15	..	20	49	0
Cephalonia; Cape Viscardo	38	28	40	..	20	33	0
Cape Aterra	38	21	30	..	20	24	15
Cape Aji	38	8	40	..	20	23	30

GEODETIC POSITIONS, *continued.*	Latitude N.			Longitude E.		
CEPHALONIA; Argostoli; Telegraph	38°	10′	40″	20°	29′	15″
Cape Skala	38	3	0	20	46	30
Cape Capri	38	7	0	20	49	30
Point Kelia	38	16	30	20	41	30
ITHACA OR THEAKI;						
Point Marmaca; the N. Point....	38	30	0	20	39	0
Bathi [pr. *Vathè*]; Entrance to ..	38	23	0	20	42	30
Point Agiani; the S.E. Point	38	19	20	20	46	0
Isle Oxia; South End	38	17	20	21	6	15
Messolonghi	38	22	0	21	27	0
Point Bakari.....	38	17	15	21	30	40
Roumelia Castle	38	19	15	21	48	30
Naupaktos or Lepanto	38	21	50	21	51	0
Morea Castle	38	18	0	21	49	30
PATRAS; Centre	38	14	0	21	46	40
Cape Papas, at the Entrance of the Gulf	38	13	0	21	25	15
Konopoli Rock	38	5	30	21	22	15
Cape Clarenza	37	56	20	21	8	40
Cape Tornese	37	51	15	21	7	30
Cape Katacolo; South end	37	38	20	21	20	0
ISLAND of ZANTE; Cape Skinari	37	56	30	20	41	30
Cape Kieri	37	38	35	20	49	30
Point Basilika.....	37	44	0	21	0	40
Zante Castle.....	37	47	0	20	54	30
Point Krio-nera	37	48	40	20	55	0
Montague N.W. Reef	37	56	15	20	58	30
Stamphané or Strofadiæ; Convent Isle ..	37	15	0	21	1	30
Arcadia; the Village	37	14	0	21	41	30
Cape Konello	37	11	40	21	36	30
Isle Prodano; Centre	37	1	30	21	34	0
Navarino; the Town	36	52	15	21	41	0
Modon; Lighthouse.....	36	48	0	21	41	0
Sapienza; South end	36	42	30	21	41	0
Cabrera; S.E. point.....	36	40	0	21	47	30
Isle Venetico; Centre	36	40	0	21	55	30
Koron or Coron	36	47	0	22	0	0
Kalamata; Landing Place	36	59	35	22	8	30
Cape Kephali	36	53	0	22	9	0
Fort Djimova; Entrance.....	36	39	0	22	22	0
Port Maina	36	31	0	22	22	0
Cape Grosso.....	36	27	30	22	20	0
Cape Matapan	36	21	30	22	28	0
Kolokina	36	36	0	22	27	0
Vasili Castle	36	48	10	22	35	0
Monte Rupina; Summit.....	36	40	30	22	48	0
Isle Servi; S.W. Point.....	36	27	0	22	55	0
Cape Malea or St. Angelo	36	26	0	23	12	0
CERIGO; Cape Spati	36	22	30	22	56	30
Kapsali.....	36	7	30	23	0	0
San Nicolo	36	13	0	23	5	30
Islet Ovo.....	36	4	25	23	0	30
Islet Porri	35	56	0	23	15	15
Cerigotto; Cape Apolitara or S. Point ..	35	49	15	23	18	0

The IONIAN ISLANDS consist of Corfù, the antient Corcyra, Paxos, Leucadia, or Santa Maura, Ithaca or Theaki, Cephalonia, Zante, and Cerigo, or Kerigo, with several dependent isles, lying between the parallels of 40° and 36° N.

By the Act of Congress, 9th June, 1815, and Treaty of Paris, 15th of November following, it was determined that the Ionian Islands, with their dependencies, should constitute one free and independent state, under the denomination of the *United States of the Ionian Isles*, and that they should be placed under the immediate and exclusive protection of

of Great Britain: at the same time, also, it was provided that the islands should regulate their own internal organization; and that, in order to give the necessary activity and consistency to their measures, his Britannic Majesty should nominate a *Lord High Commissioner*, who was to reside in the islands, and assist in framing the laws and establishing a constitution.

The constitution was accordingly drawn up, and having received the sanction of the legislative assembly, was ratified by H.R.H. the Prince Regent, 11th July, 1817. By this constitution it is ordained, that the residence of the general government shall be in the capital of the island of Corfu, and that the national religion shall continue to be the orthodox Greek church; but every other form of Christian worship is free. The Greek to be regarded as the established language; but the English may be used in legal transactions, &c. According to the census, in the year 1827, the total population of the Ionian States amounted to 175,398.

CORFU.—This island is 35 miles in length from S.E. to N.W. and of very irregular breadth; but its northern part is 16 miles broad from East to West. *Cape Drasti*, its N.W. point, lies in latitude 39° 48′, and longitude 19° 38′: *Cape Bianco*, its S.E. point, lies in latitude 39° 21′, and longitude 20° 7′.

The surface of Corfu is generally mountainous. The mountains are moderately high, detached, and rugged. On passing, at some distance westward of the island, weather clear, the Acroceraunian mountains, on the main, may be seen rising in majestic beauty. The southern extremity of the island, Cape Bianco, *(White Cape,)* is so named from its extreme whiteness; and at a distance it has the appearance of a sail.

The chief exports of Corfu are salt, oil, and olives; but the land produces excellent fruit, particularly oranges, citrons, delicious grapes, honey, and wax, with potatoes and other vegetables for the table. It has but little wood, except the olive-trees, no wild animal of chase, and but little feathered game. Its corn and wine supply the inhabitants for a part of the year only. One stream alone, which is on the eastern side, deserves the name of river. *(Potamo.)* The population, in 1827, amounted to 48,737.*

CORFU, the city, is on the inner or eastern coast; it is defended by three forts, and its inhabitants amount to more than 20,000. It has a mole wherein galleys may lie in 2 or 2½ fathoms. The entrance into the port is strikingly beautiful: the imposing appearance of the batteries; the two lofty citadels which flank the town; the port gradually extending, and defended by the small isle of Vido, formerly shaded with olives, now covered with cannon, all announce the approach toward a place of some consequence.

The town is situated within five miles of the coast of Albania. On entering the harbour you will see, on an eminence, a fort named *Castello Nuovo;* in this place are situate the different magazines, the barracks for the troops, and the telegraphs which, when the town was in the power of the French, corresponded to one placed on the highest mountain of the island, and the latter with those in Italy. On the east the town is commanded by the citadel, erected on a rugged rock, separated from the land by a deep fosse, admitting the sea on both sides. The streets are built with regularity. There are several inns, and a small theatre for Italian operas. The churches are numerous. The neighbourhood is adorned with gardens, olive-grounds, and vineyards: although not very romantic, the scenery is pleasing. A good road, of between three and four miles southward, leads to a spot called the *One Gun Battery*, from a cannon placed there. This is the place where Ulysses is said to have landed, and hence you have a beautiful view of the sea and the surrounding country, covered with olive and orange trees. The battery overhangs a strait, which admits the waters of the sea into a lake called the *Limne*, the extent of which (half a league) renders the neighbourhood of Corfu excessively unwholesome during the autumn and summer. In the middle of the Strait stands a rock, on which is a small country-house belonging to the bishop of the island: it is known under the name of *Ulysses' Ship*, and, from the ruins of a wall still visible, it appears to have been once united to the land. In the vicinity of this place are seen many ruins, which indicate the position of the antient town of *Corcyra*.

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* Colonel de Bosset says, "The abundant population of the Ionian Islands has left no cultivable spot unoccupied; with the exception of some tracts subject to the *malaria*, which inevitably destroys all those who have the temerity to disregard the warning held forth in the fate of former settlers."

In the Ionian Sea shoals of flying fish may be frequently seen, pursued by the bonita and dolphin, and which, rushing from the waters, are instantly seized by the hovering cormorant.

PORT

PORT GOVIN is three miles to the N.W. of the town of Corfu. This port is a large natural basin, with a narrow entrance: it is surrounded by marshes, and is, therefore, unhealthy. Here the Venetian galleys used to refit. At two miles more to the North is the village of *Ipso*. To the N.N.E., two miles from Ipso, is the S.W. summit of *Mount Salnador*, which thence extends to the same distance north-eastward, and forms a striking object from the south.

The WESTERN COAST OF CORFU should be approached with caution, as there are several patches of rock within a mile of the shore. On one of these H. M. sloop Weazle struck in 1812, nearly off the centre of the island.* At 10 miles N.W. ¼ W. from Cape Bianco is a conspicuous cluster, called the *Lagudia Rocks*, upon a flat extending half a league from shore; and at a mile-farther, north-westward, is a shoal of 2½ fathoms, which extends S.S.W. from shore, to the distance of a mile and a half.

Off the N.E. end of the island, forming a triangle, and at 5 miles from each other, are three small and insignificant islands, *Fano*, *Merlera*, and *Samotraki*. Between the latter and the land is a smaller one, *Diaplo*, with several rocks off its S.W. end, but there is a channel, half a league broad, between it and the N.W. side of Corfu. The centre of Fano is in latitude 39° 51′, and longitude 19° 20′. At a distance this island [ant. *Othonos*] appears like a single hill, the summit of which is covered with pines, but near the sea is some meadow land. Samotraki, the southernmost of these isles, is surrounded by rocks, which extend, on the south and west, half a league from the island, and are very dangerous.

To the south-eastward of these isles, at a mile from the shore of Corfu, is an islet, *Kravia*; beyond which, on the S.E., is a small opening named *Port Timone*, formed by a rocky promontory, from 300 to 400 feet in height, stretching itself into the sea to the southward, from the western coast.

This narrow neck of land is more than a mile in length, and on its inner part is the small village of *Aphiona*. The only cultivable part belongs to the inhabitants of this place, who rear some vines and a few olive trees; but even this, from their exposure to the whole power of the westerly winds, is effected with much difficulty; and the inhabitants depend for support chiefly on the produce of the interior. The remains of a watch-tower and a guardhouse, built by the Venetians, are the only vestiges of habitation observable on the promontory, which is well calculated for a look-out post toward the coast of Italy. The promontory forms two bays, on the east and the west, but both are open to the heavy sea, beating against the shore, and neither can, therefore, afford protection to shipping.

SAILING DIRECTIONS FOR CORFU.—From Cape Drasti, the N.W. point of Corfu, to Point St. Catherine or the North Point, the bearing and distance are E. ¼ S. 9½ miles; and from the latter to the rock *Tignoso*, at the entrance of the North Channel, S.E. by E. 6½ miles. *This rock is now distinguished by a lighthouse*, as will be shown hereafter, first lighted in 1825, together with a new lighthouse on Cape Crido or the Old Citadel of Corfu, a light-vessel off Point Alefkimo or Lefkimo, on the S.E. side of Corfu, and a lighthouse upon a small isle at the entrance of Port Gayo, on the eastern side of Paxo.

The directions which immediately follow were written by the late Mr. Wm. Smith, when master of H. M. ship *Ganymede*, and before the lights were established. We give them, nearly as originally written; for they will be useful should the lights at any time happen to be discontinued: but following these will be found the official directions, dated April 1, 1825, in which the uses of the different lights are fully explained.

Mr. Smith says, firstly, "In steering for the island of Corfu from the S.W. with the wind to the *northward* of West, I would recommend making the island of Fano, and going in through the *North Channel*. Pass to the northward of the islands Fano and Merlera; then steer in about E.S.E. or S.E. by E. for the entrance of the channel. There are two rocks lying off the N.E. end of Corfu, called *Tignoso* and *Barchetta*, the largest is between 40 and 50 feet high, and is about the size of a line-of-battle ship's hull; the small one is not larger than a jolly-boat, above water, and lies half a mile E. by S. from the former. There is a good passage through, between the Tignoso and Corfu: it is three-quarters of a mile wide, with from 20 to 30 fathoms of water in it. The rock is bold-to, and may be passed at the distance of a cable's length; but a rocky shoal extends off from the Barchetta in a N.W. direction, about three cables' length. The marks to clear the latter, in passing between it and the Albanian shore, which is the grand channel, is the

* A sunken rock, lately inserted in the chart, lies at nearly a mile from shore, *N.N.W. true*, from Cape Kephali, on the N.W. coast.

island

island Merlera its own length open of the North point of Corfu, until *Cape Crido*, or the south-easternmost hill of Corfu Old Citadel, (and which may easily be known by the fortifications upon it,) bears S.S.W. ½ W.: it will then be on with the highest part of the southernmost of two mountains that stand beyond the town of Corfu. Steer with the latter marks on, and they will lead you clear of all danger and right up to the town.*

There is a dangerous shoal, the *Sarpe*, lying between 300 and 400 fathoms from the N.E. point of Corfu, and about 1½ mile S. by W. from the Tignoso: it is dry in some parts, and there is a narrow channel between it and the island for small vessels: it is very steep on the east side; 14 fathoms of water within a boat's length. Cape Crido bears from its eastern extremity S.S.W.; the Tignoso N. by E.; and a round white tower *(S. Stefano)* standing on a hill just above it, N.W. by W. ½ W. The leading-mark above given carries you clear of it; the thwart-mark to clear it to the southward is, the white tower on with a small guardhouse standing upon a point a little way to the southward. In passing to the northward, when the said tower bears West, you are clear of it.

In turning through this channel, you may stand as close as you please to the Albanian coast; as it is all bold.

South Channel.—With the wind to the *southward* of West, steer for the island Paxo, which is moderately high, has some white cliffs on its west side, and in clear weather may be seen from the deck of a frigate, at the distance of 10 or 11 leagues. *Cape Bianco*, or the south point of the island Corfu, is also high, and has something of the appearance of Beachy Head, in the English Channel. It lies eight miles north of Paxo, and there extends from it a long flat, of 2½ miles, in a S.E. direction, and from thence it borders to the S.E. side of Corfu, as far as Point Lefkimo, a distance of nearly eight miles. On its eastern extremity is a white buoy. To avoid it, observe to keep in mid-channel, or nearer to the island of Paxo; steer in N.E. by E. or E.N.E. until within two or three miles of the Albanian shore: you may then steer N. by W. or N.N.W., observing not to round the shoal of Bianco in less than 10 fathoms of water.†

In clear weather, when the marks can be seen, bring the westernmost hill of *St. Salvador*, (in the N.E. of Corfu,) on with, or a little open to the eastward of, the easternmost hill on Cape Crido, or Corfu-castle, bearing N.N.W. You may steer with these marks on, and they will lead you right up to Corfu.

There is a village on the south side of the first mountain to the northward of Cape Bianco: when this village bears West, you are clear of all the dangers on the Corfu side, and with a beating wind may stand in as close as you please. In working through this channel, you may stand as close as you please to the Albanian coast while to the southward of the northernmost of three small islands that lie on that shore; but, when to the northward of these, do not stand within three miles of it, in order to avoid a long flat shoal which stretches off to nearly that distance with no more than two feet of water on many parts of it, and is steep-to, from 24 to 6 fathoms, in a ship's length. Marks for its outer edge, in 6 fathoms, soft muddy bottom, are the southernmost of the three islands its own length open of the northernmost, bearing S.S.E.; the N.W. point of Paxo about a cable's length open of Cape Bianco, S. by W. ½ W.; Corfu-castle N.W. by W.; and, the easternmost hill on St. Salvador N.N.W. ½ W. Observe, in standing toward it, not to open the island of Paxo more than a ship's length of Cape Bianco. When Corfu-castle bears W. by N., you are to the northward, and when the said North island bears E. by S., you are to the southward of it, and may stand closer in.‡

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* Within the North Channel there is a good and well-sheltered anchorage, in the *Bay of Butrinto*: and near the entrance of the channel, four miles more to the northward, there is also anchorage sheltered by the islets called *Tretanisi*, or the Brothers, which lie near the main.—*Edit.*

† We have been informed that the shoal extending from the S.E. end of Corfu has increased so much as now to extend nearly two-thirds over from the island.—*Edit.*

‡ Another officer says, "If, in hard-blowing southerly winds, you should not be able to weather Cape Bianco, at a sufficient distance to round the shoal, it will be adviseable to bear up to the northwestward for the island of *Fano*, taking care to pass well to the westward of the reefs on the west of *Samotraki*: having passed them and the island, you may haul up to the eastward for St. Catharine's Point, the northernmost point of Corfu, leaving the islands Fano and Merlera on your larboard or north side.

"You may anchor to the eastward of St. Catharine's Point, on good ground, near the coast, and sheltered by the island, until the wind becomes moderate, and then proceed to the Road of Corfu. You may also anchor under the island Merlera, in from 16 to 20 fathoms, choosing your situation according to the wind."

The

THE ROAD OF CORFU lies between the island of Vido and the town, in which is the general anchoring-place for men-of-war. Its depths are from 14 to 20 fathoms, with good ground. To anchor, bring Cape Crido, or the Old Citadel Point, to bear S.E. by S., and the S.E. end of the island Vido N.E.; observing to shut in *Cape Butrinto*, on the Albanian coast, with the S.E. end of Vido: as also Cape St. Nicolo with Cape Crido; here you lie in from 14 to 17 fathoms of water, mud and clay, good holding-ground. Moor with an open hawse to southward and eastward, on account of the strong winds that generally prevail from that quarter; and as the sea also has the longest fetch that way.

There is a sunken rock, nearly in the fair-way of the anchorage, in 16 fathoms of water, about half a mile W.S.W. from the landing-place at Vido: to avoid it, anchor closer to the town than the island. There is anchorage all over the channel of Corfu, in from 35 to 38 fathoms of water, soft muddy bottom and good holding-ground.

There is generally a current running in the channel, which is much influenced by the wind; during a strong northerly wind it sets to the southward, at the rate of 1½ or 2 knots per hour, and occasions a fall of water, of from 3 to 4 feet; a southerly wind affects its rise to about the same height, and the current then sets to the northward. The pilots say that the most prevailing winds, in the winter season, are from S.E. to S.W., and which are, in general, accompanied with thick weather and heavy rains. The N.W. and North winds blow very strong, but, in general, do not continue long.

Water may be had from several wells to the northward of the town, but not sufficient for a fleet during the summer season; nor is it allowed to be good. At about a mile south of Cape Crido, or the Old Citadel Point, is a small reservoir of good water, sufficient to supply one or two ships in the winter-season, and which may be filled in the boats with hoses.

Wood is scarce, and very dear, as at all the Ionian Islands; they producing little other than olive and fruit-trees, which are not allowed to be cut. Fresh beef, of inferior quality, and refreshments may be obtained.

"The town of Corfu is remarkably strong, both by nature and by art. In the wide ditch, which separates the old citadel from the town, is a depth of 8 to 9 feet of water, and it is capable of holding a number of gun-boats."

Explanation and Directions, from the Official Instructions for Vessels navigating the CHANNELS *of* CORFU.

"The Ionian Government, desirous of affording every possible security and facility to vessels navigating the channels leading to Corfu, has caused to be erected four lighthouses, which are kept constantly lighted every night, from sun-set to sun-rise.

"The first is on the *Old Citadel of Corfu;* it is a single light, 240 feet above the sea, and can be seen from the entrance of the North Channel, and from some distance to the southward of Point Lefkimo, in the South Channel; it is particularly useful to guide ships to the harbour of Corfu.

"The second is a single floating-light, moored off Point Lefkimo, in the South Channel. The vessel lies in five fathoms of water, one cable's length, N.W. ¼ W. from the N.E. point of Lefkimo Shoal, and bears from the Windmill to the southward of Point Lefkimo, N. ¼ W.: from the S.E. extremity of the island of Corfu, N. by W.: from Black Island, N.W. ¼ W., distance eight miles; and from Corfu Lighthouse, S.S.E. distance 10½ miles.

"The third is also a single light at the east side of the island of Paxo, upon a small island at the entrance of Port Gayo. The light is upon a tower, which bears from the south end of Paxo Shoal W. ¾ N.: from the north end of ditto, W. ¼ N. The centre of the shoal is 1¾ miles distant from the light, and the S.E. point of Corfu bears from it N. ¼ W.; S.E. extremity of Anti-Paxo, S.E. ¼ S.; Black Island, N. by E. northerly; N.E. end of Paxo, N.W. by N. This light is particularly useful to the small coasting vessels running for Port Gayo (or what is more commonly called Paxo Harbour) in bad weather, as also to all vessels passing through the South Channel.

"The fourth is a single light on the *Rock Tignoso*, in the entrance of the North Channel. It is a most valuable light to vessels passing through this channel to guide them clear of the Barchetta, or Boat, and the Sarpe Rocks. The N.E. point of Corfu Island bears

bears from it S. by W. ½ W. nearly; Corfu Light shut in behind this point; the Sarpe Rock bears from it S. by W. ¼ W.; S.W. point of the Albanian Coast, S. ¼ W.; Boat Rock, E.S.E. ½ E. nearly half a mile distant, with 16 and 20 fathoms of water between them. S.W. extremity of the land about Cape Linguetta, N.N.W. ¼ W.; and the north point of the island Melera N.W. by W. just open to the northward of the north point of Corfu."

DIRECTIONS FOR THE NORTH CHANNEL BY NIGHT.

"In coming for this channel, when you would make out the light, steer straight for it; and I would recommend all ships, with a leading wind, to pass between the light and the island of Corfu, to avoid the Boat Rock, which is not larger (above water) than a small boat, bottom up, and has a shelving reef stretching off from it N.N.W. ¼ W. about 120 fathoms, with from 2 to 7 fathoms of water upon it. This channel, between the light and Corfu, is six-tenths of a mile broad, with 30 fathoms of water in the middle, and steep-to on both sides. After passing the light, steer S.E. ¼ S. or S.E. ½ E. bring the light to bear N.N.W. ¼ W., and keeping it on that bearing, will lead you clear of the Sarpe Rock, which lies just to the southward of the N.E. point of Corfu. This is a very dangerous shoal by night, it being nearly level with the water, and so steep-to, that the lead is of no use. When you get sight of Corfu light, bring it to bear S.S.W. ¼ W., and by keeping it so, it will lead you clear of all danger, and right up to the east end of the island of Vido; pass one-quarter of a mile to the eastward of that island, then steer in, and anchor any where between the island and town of Corfu.

"Ships passing through the North Channel, with variable or a beating wind, will find it better to pass to the northward of the light, and then it must not be brought to the westward of W.S.W. ½ W. until you are a good mile to the eastward of it (to avoid the Boat Rock), or until Corfu light bears S.S.W. ¼ W.: when the North Channel light bears W. by N. nearly, it is on with the Boat Rock; and when the light bears W. ½ S., you are well to the southward of the Boat Rock. In beating through this channel, keep on the Albanian shore, it being all bold; and stand very little more than half channel over to the westward until you are well to the southward of the Sarpe Rock.

"Vessels going to the northward will have no difficulty in observing these directions in a contrary order."

DIRECTIONS FOR NAVIGATING THE SOUTH CHANNEL.

"In coming from the southward of Paxo, for the South Channel, with southerly or south-westerly winds, you may pass between Paxo Shoal and light, or to the eastward of the shoal, at pleasure. To pass between the shoal and light, give Anti-Paxo a good berth, and as soon as you open the light, bring it to bear N.N.W. ½ W. or N.W. ¼ N., then steer for it, and keeping it on either of these bearings will lead you to the westward of the shoal: pass half a mile to the eastward of the light, and when it bears W. ¼ S. you are to the northward of the shoal, and may keep away N. ¼ W. or N. ¼ E. When Paxo light bears S. ¼ W. keep it on that bearing, and it will lead you well to the eastward of the buoy on the S.W. extremity of Cape Bianco Shoal. When the Cape bears W. ¼ S., or Black Island E.N.E. ¼ E., you will be to the northward of the buoy, and may then steer N.N.W. ½ W. or N. by W. ½ W., according to the wind. You will then very soon get sight of Lefkimo light, which must not be brought to the northward of N.W. ¼ N. To keep you clear of Lefkimo Shoal, which is a continuation of the one off Cape Bianco, and runs along the east side of Corfu as far as the light-vessel, pass half a mile to the eastward of the light, and generally by this time you will see Corfu light; bring it to bear N.N.W. ¼ W. or N.N.W. ¼ W., then steer for it; pass half a mile to the eastward of it to clear Old Citadel Point, then steer in and anchor as before.

"Ships coming from the westward for the South Channel, between the island of Paxo and Cape Bianco, should keep in mid-channel, or nearer to the former than the latter; steer in N.E. ½ E. or N.E. by E. ½ E., and, after opening Paxo light, continue on the same course until the light bears S. ¼ W., then proceed as above.

"In coming from the southward, it will most generally be adviseable to pass to the eastward of Paxo Shoal; then keep in mid-channel, or rather with the Albanian coast on board, it being all bold, and may be approached within half a mile. When Paxo light bears W. ¼ S. you are to the northward of the shoal. When working through the South Channel, while well to the southward of Lefkimo light, you may stand to the westward until the light bears N.N.W. ½ W.; but when within a mile of it, it must not be brought to

to the northward of N.W. ¼ W. to avoid the N.E. elbow of the shoal. The Albanian coast is all clear and bold to the southward of the light-vessel; but after getting abreast of her, you must not stand within two miles of it, to keep clear of the *Bacchante Shoal* or *Bank*. The Corfu side is then all clear, and you may stand well over toward it."

PAXO.—Paxo is only 4½ miles long, from N.W. to S.E. In olives it is one of the most fruitful, but it produces nothing else, being generally rocky. Its little port, *Gayo*, above-mentioned, is on the eastern side, and the light-tower, which is square and white, stands on the *Isle of the Madonna*, by which it is sheltered. The town is merely a poor village, where a few sheep, some goats, and fowls, may be obtained. About one hundred boats belong to it, kept for fishing and other purposes. A reef extends from the N.W. end of the island to the distance of nearly three-quarters of a mile. The population of Paxo, in 1827, amounted to 3,970 persons.

There is now a LIGHTHOUSE on the N.W. point of Paxo, erected by the Ionian government, on a cliff in the vicinity of Lacca. The top of the lantern is 369 feet above the level of the sea, and the light is from sixty common oil lamps or burners. From the light-house a buoy on the shoal stretching from Cape Bianco bears N. 23° E., or nearly N.N.E. and Parga castle S. 88° E., or East nearly ¼ South.

On the west of Paxo the light can be seen until it bears N. by E., when the high land intervenes; and, in coming from the southward, between Paxo and the main, it is not seen, from the same circumstance, until it bears W. by N. When you are to the northward of the light, and it bears S. by E., you are in a line with a rock off the north end of Paxo, which lies on the reef about half a mile from the north part of the island, having only 5 feet over, and 17 fathoms close-to.

Vessels coming in from the westward, between Paxo and Cape Bianco, by bringing this light on a S.W. bearing, and steering N.E., will go well clear on the S.E. of Bianco Shoal; and, when Gayo light, on the eastern side of Paxo, bears S. by W. you will be well to the eastward of the shoal, and may shape your course more northerly. Gayo light is described page 175. This light first appears clear of the N.E. of Paxo when bearing S.E., and from the southward it is seen clear of Anti-Paxo when bearing N.N.W.

The light may be seen on any bearing when not hidden by the land, which obscures it from the S.E. quadrant, between E. by S. and S. by W. (*Chas. Rose*, Inspector-General of Ionian Coasts and Harbours, Corfu.)

The smaller and uncultivated isle, ANTI-PAXO, is divided from Paxo by a channel one mile in breadth, but having a great depth of water, and on both sides bold-to. The isle is two miles long, from N.W. to S.E., and from its south end a range of high rocks, the *Vascaglia*, extends in a true South direction, to the distance of nearly a mile, and they terminate in a reef called *Plakka*, near which are from 10 to 5 fathoms of water. On the west side of the isle is a little cove, off which you may anchor during an easterly wind.

The *Madonna or Paxo Shoal* lies at the distance of a mile and three-quarters to the eastward of the Port of Gayo, as shown in the preceding description of lighthouses. The channel between is of great depth, though the centre of the shoal is nearly dry. The extent of the bank is a mile, in a direction parallel with the island; on its outer parts are from 3 to 6 fathoms.

COAST of ALBANIA to the GULF OF ARTA.—The first spot, of any consequence, on the Albanian coast, to the south-eastward of Corfu, is PARGA, which stands at 14 miles from Cape Bianco, and 10 from Paxo. Parga is a small town, surrounded with walls, and built on a conical rock, about 240 feet above the level of the sea, which, on three sides, washes its base; it is thus situated between two small bays, or rather coves, which afford convenient landing places. This fortress is crowned by a sort of citadel, where the commandant resides. It embraces a magnificent prospect, including, on one hand, the whole territory of Parga, and the mountains of Albania, by which it is bounded: from east to west, in a southerly direction, the eye ranges over a part of the Ionian Sea; on the left is seen the Isle of Santa Maura, and the promontory of Sappho; farther on, appear the mountains of Cephalonia; and on the right, at the distance of 10 miles, are the islets of Paxo and Anti-Paxo. The territory of Parga, backed by steep mountains, extends about 6 miles along the coast, and generally about two in depth.*

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* The town consists of one street and a few narrow lanes; the houses are extremely poor, but have a pretty appearance, from being perched on the sloping side of a hill.

The COAST EASTWARD OF PARGA.—From Parga, eastward, the coast trends E. by S. (nearly *East*) 5 miles, to the little port of *St. Giovanni*; thence S. by W. (nearly *South*) 4 miles, to the point of *Amouna*. From Amouna to the point of *Papalaka*, near *Kastrosikia*, the bearing and distance are S.S.E. ¼ E. 3 leagues. The coast in all this extent is generally bold-to, with the exception of some rocks extending from the projecting points, and the *Ittisa Reef* extending around Papalaka Point, to the distance of a mile from the shore. At two leagues farther, S. by E., is the point and village of *Mitika*: the coast between forming the sandy bay of *Gomaros*, where there is anchorage, generally, in from 15 to 6 fathoms.

At the distance of half a league westward from the shore of Mitika, is the *Petalla Shoal*, which is a mile long, from E. by S. to N. by W., and has, toward the west, very little water. The depths in the channel, between it and Mitika, are from 6 to 9 fathoms.

PREVISA OR PREVESA.—From Mitika to the entrance of the Gulf of Arta the distance is only 5 miles S. by E. At a mile within the entrance, on the N.W., is the town of PREVISA. Mr. Turner visited this place in 1813, and he says of it, We did not see the town till we were quite close to it, as it stands within the bay, and is hidden by the Pasha's palace, a fine gay building, standing to the left on the entrance to the bay: to the right is a small battery. The bay is divided by a narrow neck of land which reaches half-way across, beginning at the entrance. On the other side of this land is the famous bay of *Actium*, beyond which are seen very high mountains. The city was ruined by Ali Pasha in 1798, and consists of nothing but miserable houses, given by him to his soldiers. New fortifications were building around it. Behind the town is an extensive olive grove; and in the gardens are figs, grapes, peaches, quinces, pomegranates, &c. The ruins of *Nicopolis* (now called *Paleo Kastro* or the *Old Castle*) are about 4 miles distant to the northward from Previsa. The road between, which is still very good, was formerly covered with the Venetian country-houses, all which the Turks have destroyed. The *Plain of Arta*, to the north-eastward of Previsa, is noted for its malaria, and its inhabitants are greatly afflicted by fevers and agues: its unwholesome air is breathed at Previsa, whose inhabitants, during summer, always close their windows after sun-set.

Provisions are reasonable at Previsa. An ox may be purchased at about eight dollars, and a sheep for a dollar to a dollar and a half. Vegetables are not abundant, although fruit is plentiful. The little commerce that Previsa enjoys, consists chiefly in exporting firewood and cattle to the Ionian Islands. The country in the neighbourhood is one large plantation of olives.

A bar stretches over the entrance of the Gulf, which is very shoal on each side, and in mid-channel are only 2½ to 3 fathoms. It therefore renders the place, as a harbour, of little importance.

There is anchorage from between one to three miles off the entrance, with off-shore winds, in from 10 to 18 fathoms of water, hard sandy bottom, consequently bad holding ground. Mr. Smith, in his journal of 1818, says, "We anchored in 17½ fathoms, with the fort on the north side of the entrance, bearing E. by N. and the fort of Sta. Maura S. ¼ W., about 2½ miles off shore, and here we rode out a very fresh gale from the E.S.E. and S.E. points of the compass; while we lay here there was generally a current setting out of the Gulf, sometimes at the rate of 1½ knots an hour." The entrance of the Gulf is defended by one fort on the south, and two on the north side; all very low, and little above the level of the sea. The shoalness of the water will prevent an attack by sea, except by vessels of a light draught.

LEUCADIA or SANTA MAURA.—The southernmost point of this island, *Cape Ducato*, lies in latitude 38° 33½′, and longitude 20° 33′. SANTA MAURA, for so the island is now generally called, was formerly a peninsula, and is now separated, on the N.E., from the coast of Albania, by a narrow passage, through which small boats only can pass. The island is composed of heathy mountains, separated by fertile valleys, which produce corn,

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With the exception of the rock, the Parganote territory may be said to consist of one continued olive grove, interspersed with gardens, orchards of orange and lime trees, and little cottages, which, with here and there a tall cypress towering above the rest, give a lively variety and a pleasing animation to the picture. The sides of the hills are planted with vineyards, and the open spaces produce a little wheat and Indian corn, sufficient for about four months' consumption of the population; the remainder of their grain being partly purchased with the little returns of their oil, oranges, &c., from the Adriatic and country to the North.—*Quarterly Review, May*, 1820.

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wine, oil, fruits, and good pasture.* Its lagoons afford a great quantity of salt, and enormous eels. The population is estimated at 18,000. By census, in the year 1827, it was 17,425. Its principal town is AMAXIKI, on the N.E. coast, the access to which is defended by the *Castle of Santa Maura*, at half a league from it, on the North shore. The castle is strong and well-built, and its mole extensive.

The canal which separates Santa Maura from Albania is frequently crossed in *monoxylæ*, or canoes, and at certain seasons of the year the inhabitants find no difficulty in wading from shore to shore: in mild weather the wind blows here in an easterly direction, from sun-rise till past noon; it then shifts, and generally blows from the West.

The modern town is built on the northern and most unhealthy part of the island, and close to several salt-pits; these are formed on the coast, and separated from the sea by sluices, which admit the water into a shallow preserve, the heat of the sun sufficing to effect the crystallization. The shores hereabout are low, and the shallows abound in fish of different kinds. Between the town and castle the shortest communication is obtained by the remains of a narrow Turkish aqueduct, which crosses the shallows: it consists of above 300 arches, and, in windy weather, the passage is by no means safe, as the pedestrian runs the risk of being blown into the sea.

The town of Santa Maura is commanded by a mountain, from the summit of which a fine view is obtained of the island, the fort, Albania, and the Ionian Sea. Near it is a small convent. The shoals along shore are so extensive that no boat, drawing much water, can come within half a mile of the town.

On the mole-head of the harbour is a round tower, which exhibits a light at 45 feet above the level of the sea. In running for the mole in the night, the light should not be brought to the eastward of S.E. by E., as a low point of beach stretches from it to some distance.

The LEUCADIAN PROMONTORY forms the S.W. coast of Santa Maura, and terminates with *Cape Ducato*, which is the extremity of a long ridge of limestone rocks. Some particles of mica, being washed by the torrents into the valley, have caused the name of the *Silver Mountain* to be given to one of those near the *Lovers' Leap*. The spot bearing this name is a projecting and over-hanging rock, two miles northward of Cape Ducato, and famed for the desperate leap of Sappho. It is a tremendous stony precipice, 200 feet high, with pointed rocks projecting from the sea below.

When seen from a distance, the cliffs of this coast bear a very white appearance, to which the promontory and the whole peninsula owed its antient name, *Leucas*.

There are several Isles on the S.E. of Santa Maura, that form the channels leading to the principal Road, PORT DEPANO, which is on the N.E. side of the Island, about three miles South of the town, Amaxiki. Of these Isles the first is *Arkudi*, half a league long, from North to South, and 7 miles E. by S. from Cape Ducato. At a league to the north-eastward of Arkudi is *Meganisi*, a very irregular island, 5 miles in length, opposite to which, on the East, are the islands *Kalamo* and *Kastus*, and between is the principal channel to Port Depano, the depths in which are from 90 to 60 fathoms. To the northward of Meganisi are the islets *Scorpio* and *Sparti*, with two smaller islets, and several rocks. Meganisi, as a dependency of Santa-Maura, is under the presidency of a magistrate; it has about 300 inhabitants, who find great difficulty in procuring a scanty subsistence from some arid tracts of land, and from the produce of their sheep and goats, which feed mostly upon the brush-wood, the chief vegetation of the island. It is rocky, destitute of any fresh water, except that which falls from the clouds; and hence the inhabitants are obliged to send abroad for a supply. In dry seasons fresh water is, at times, so scarce that the sheep and goats are known to drink the water of the sea.

PORT-DEPANO, above mentioned, is an extensive and good anchorage, completely land-locked, but the sea has a fetch into it of 5 or 6 leagues from the southward and east-

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* Mr. Turner, writing in 1813, says, This island is still very fertile, but its plains are overflowed all the winter, whence its inhabitants are commonly afflicted with ague, &c.

When in sight of Santa Maura and Ithaca, in the latter days of January, 1810, Mr. Galt writes, "With you winter is still in full possession of his bleak dominion; but, in this delightful climate, he appears to be gone, and the time of the singing of birds arrived. The air has all the genial warmth and blandishment of the English May; and the snow on the tops of the neighbouring mountains of Greece serves rather to give picturesque variety to the prospects than to remind the traveller that it is still the month of January."

ward.

ward. In coming toward this port, you enter by the South end of Santa Maura, on the parallel of 38° 32′, and will find that there are two channels, the one to the eastward, and the other westward, of Meganisi, Scorpio, and Sparti.* The eastern channel is the principal, being large and clear. The island Arkudi is bold-to, and may be passed either on the North or South, according to the wind, only taking care to avoid a rock, *Petallis*, which lies at a mile from the S.W. coast of Meganisi. You may pass the South and East points of the latter at the distance of a quarter of a mile; and, having passed these, you will see *Fort Giorgio*, a large square white fort on the Albanian shore, bearing N. by W. ½ W.; with a leading wind steer for it, and it will lead you right up to the anchorage. In working through this channel, you may stand from side to side, as close as you please, both shores being steep-to, and there is no danger.

The channel to the westward of Meganisi is narrow and difficult. In some parts it is not half a mile wide, and the land on both sides is very high, which makes it subject to calms and variable winds, and, Mr. Smith says, I would not recommend it without a fresh breeze blowing right through. The only dangers in it are some rocks above water, lying off the west side of Scorpio, and from which extends a rocky shoal, about 70 or 80 fathoms, with from one to two fathoms of water on it. The mark to clear it is the before-mentioned Turkish fort open to the westward of the Island of Sparti. The course through this channel is N. by E. ½ E.

The best anchorage for men-of-war is the S.W. of the *Fort Giorgio*, in from 10 to 15 fathoms of water, mud and clay, good holding ground. In a war with the Greeks, the adverse ships could not lie here while the fort is in their possession, as it commands the anchorage; but ships may anchor all along the East side of Sta. Maura, in from 25 to 12 fathoms of water, muddy bottom, good holding ground, and out of gun-shot.

There is also good anchorage between the islet Maduri, and the entrance of Port Climeno or Vliko, (within the Isle Sparti,) in from 15 to 12 fathoms of water. This harbour is too shoal for large ships, there being no more than 3 and 3½ fathoms of water in most parts of it, and the entrance is no more than 50 fathoms wide.

There is generally a current setting either to the northward or southward; and, in blowing weather from the southward, the water has been seen to rise more than 3 feet; but there is no regular tide.

The most prevalent winds, in the winter season, are from between the S.E. and S.W. points of the compass; the N.W. and North winds blow strongest, but are of short duration.

There is a fine run of water near a white shingly point about 2 miles S.S.W. from the anchorage; ships may anchor in between 2 and 3 cables' length of it, and water in a very short time, by rafting the casks off. Plenty of wood may be obtained from the Albanian shore, but none from Sta. Maura.

Remarks by the Master of H.M. Ship Revenge. (About 1827.)—"We anchored in *Port Depano* in 18 fathoms, blue mud and stiff holding ground, with Fort Giorgio N.E., Meganisi S. ½ E., Sparti S. by W. This excellent harbour is land-locked, and well sheltered from the prevailing winds of the country. Of the two channels leading to it, the eastern is not only the most spacious, but least subject to the calms and baffling winds found in the western channel. The shores on either side are bold, and may be approached with safety to a cable's length, nor is there any thing to fear in working up, as there are no dangers but what are visible.

"Abundance of water may be had at about four miles from the anchorage, but I should recommend to all in want of water to anchor off the watering place between Santa Maura and the Isle Sparti. The marks for anchoring here, which cannot be mistaken, are, a white house on the top of Manderin Isle S.W. ½ W., the centre of the cove in Sparti S.S.E. ½ E., and the old wall of the watering place N.N.W. ½ W. With these bearings you will have 25 fathoms, blue mud, abreast of the watering place, and be perfectly sheltered."

The Rock Sessola lies in latitude 38° 42′, about half way down the western coast of Santa Maura, and at a mile from the nearest shore. In the passage between are from 30 to 56 fathoms; but there is said to be good anchorage within the rock, in 13 or 14 fathoms.

The little Isle Arkudi, above-mentioned, which lies in the mid-channel, S.E. of

* Between Meganisi and Scorpio are several dangerous rocks.

Leucadia, is indifferently cultivated; it has excellent pasturage for goats and sheep, which are sufficiently numerous, with huts for their attending shepherds.

The Island KALAMO, eastward of Meganisi, is inhabited and slightly cultivated, with olive-trees and vines. Its pasturage is indifferent; it has fresh water, with a small harbour on the S.E. side, named *Geroglimione*, and which is well sheltered.

KASTUS, which lies to the south of Kalamo, is inhabited and cultivated. It has pasturage, olives, and water.

ATOKO, an islet two miles long, which lies at two leagues true *East* from the northern part of Ithaca, has some good arable land, with a little pasture for goats and sheep.

In the groupe of islets on the coast of LIVADIA, eastward of Atoko and Ithaca, *Dragonara*, one of the largest, is inhabited. It has olive-trees and pasturage. On the N.W. side is a little port or harbour. *Provati* and *Pondico* have some inhabitants, and are partially cultivated. *Modi*, more to the south, has about one-third in pasturage. *Vromona*, which is more than a league to the S.S.W. of Modi, is a mile in length, from North to South: a little is under cultivation; the rest is pasturage. *Makri*, next to the east, has few inhabitants, is little cultivated, but has fresh water. *Oxia*, a much larger isle than either of those above mentioned, is a league to the southward, or rather south-eastward of Makri; it has a priest, and four or five inhabitants from Ithaca. The land is in a state of cultivation and pasturage.*

CEPHALONIA, [ant. CEPHALLENIA,] the largest and most populous of the Ionian States, lies between the parallels of 38° 2′ and 38° 29′ N., and between the meridians of 20° 21′ and 20° 50′ E. Its form is exceedingly irregular, and the face of the country mountainous. The coast, as seen from sea, appears much more beautiful and picturesque than that of Corfu; and would be still more so, if the hills were covered with wood; but they are, too generally, stony and barren: Cephalonia, therefore, by no means maintains the proportion between its resources and its size. The chief products of the islands are currants, oil, and wine, of which the cultivation is more lucrative, and, therefore, more general, than that of corn. Its population, in 1827, amounted to 48,857. Goats are the principal quadrupeds of the island. The capital is *Argostoli*, situate in the S.W., on the eastern side of the principal harbour; and besides this, the island is stated to contain 175 villages and hamlets.

CAPE VISCARDO, the north point of Cephalonia, lies in lat. 38° 28′ 30″. *Cape Atterra*, the N.W. point, in lat. 38° 20′ 30″. The coast between forms a bay, in which, near the middle, on the eastern coast, is *Fort Asso*, erected on a headland, connected to the main by a low and narrow sandy isthmus. The coast southward of Cape Atterra, to the distance of 14 miles, where it terminates in *Cape Aji*, is generally high and precipitous. The last cape forms the western side of the entrance to *Port Argostoli*. The opposite point of the entrance is that of St. Nicolo.

GULF OF ARGOSTOLI.—From Point St. Nicolo this port, or more properly gulf, extends three leagues to the North, and its main breadth is about half a league. The view on entering is delightful. Verdant mountains, with more lofty ones at a distance, in winter covered with snow, and a small neat town, *Liruri* or *Lisuri*, on the left, form a lovely combination. In the line of the two capes forming the entrance, but toward the west, is a small low isle, *Guardiani*, on which is a convent of Greek *papas*, or priests. Upon this isle there is also a handsome round tower, exhibiting a light at 122 feet above the level of the sea; and within the harbour, on Point Teodoro or St. Theodore, on the eastern side, an elegant small structure, in form of a temple, to exhibit a harbour light, appearing under the high land. This object, bearing N.N.E. ½ E. leads directly into the harbour.

At a league and a half to the northward of Point S. Nicolo, on the eastern side of the gulf, is the inner port or harbour, having the town on its western side. This harbour is rather more than a mile in depth from North to South, and its depths are from 12 to 5 fathoms. It seems like a river, and sentries are stationed on it to speak the boats that pass. The town, *Argostoli*, is a poor place, containing about 2,500 houses. On a high hill N.W. of it is a telegraph, which commands an extensive and delightful view of the surrounding country, the ports, and the open sea.

The inner harbour is an excellent place of shelter, but it has the inconvenience of facing

* See Capt. Smyth to the Baron von Zach. '*Correspondance*,' &c. Vol. IV. pp. 137, 8.

a wind

a wind from N.N.W. On the eastern side of it is a gigantic mountain, which overhangs the town, and, by confining its prospect, spreads over it a perpetual gloom. In the country immediately around the capital, the roads are new and excellent. The scenery in the neighbourhood consists chiefly of meadow land, bounded by high mountains, and this land is thickly planted with vines, and over-run with herbs, &c. On a hill, at a short distance from the town to the S.E., is a castle, which, though in ruins, is still fortified and garrisoned by a small detachment. This castle could never have been very strong, being completely overtopped by neighbouring mountains, which, in the rainy season, render the place very damp.

The South coast, between Cape Aji and the Punta S. Giorgio, (otherwise *Point Lisuri,*) which is three miles more to the eastward, is bordered with a shelf, about half a mile broad, which spits out from the last point nearly a mile to the South. This, therefore, renders the passage between it and the isle Guardiani narrow, and sometimes unsafe. The coast and point of St. Nicolo, on the opposite side, are also shoal and rocky. The direct course into the harbour is North, and the general depths from 12 to 16 fathoms, with the exception of one spot of 9 and 8 fathoms, nearly in mid-channel. When well in, you may anchor, almost at pleasure, in from 11 to 6 fathoms.

In the manuscripts of Mr. Smith, which we have already so frequently quoted, this gentleman says that, in steering for Port Argostoli, from the northward, you should always pass to the southward of the isle Guardiani; giving that isle the berth of a mile, in order to avoid the flat which surrounds it. The marks for clearing this flat are, the church of St. Nicolo, which has a white steeple, and stands near St. Nicolo Point, on with the centre of a village above it and bearing nearly East. Keep this mark on until you open the town of Lisuri, within the eastern point of the gulf; you may then steer northward, observing to keep the two northernmost windmills at Lisuri on with, or open to the eastward of, the easternmost steeple of that town,* in order to avoid the reef which stretches to the southward from the point of St. Giorgio. The thwart-mark for the reef is, a remarkable bluff point, on the eastern side of the entrance, about halfway between St. Nicolo Point and Point St. Todera, on with a large white house standing on the hill above it, and near to a village.

After passing the Giorgio or Lisuri Reef, the course in is N. by E. until past Point St. Todera, which is at the entrance of the inner harbour, and is very low: a rocky shoal extends from it to nearly a cable's length N.W., and also to a distance within it, and round the next point. The marks to clear it are, the building on the isle Guardiani on with Point St. Giorgio, until you open the town of Argostoli: you may then steer in mid-channel, or keep the starboard shore on board, and take up an anchorage.

Ships coming from the southward will find no difficulty in entering the harbour, only observing to give the islet and point of St. Nicolo a berth of one quarter of a mile, and so as to avoid some rocks lying off them under water.

In turning in or out of this harbour do not stand within one quarter of a mile of either shore; as within that distance there are several spots of foul ground, with from 2 to 3 and 4 fathoms of water on them. In the fair way you will have from 12 to 15 fathoms.

The best anchorage in the Outer Road is with Point St. Todera, bearing E. by N., or E.N.E., three-quarters of a mile, in from 12 to 13 fathoms of water, soft muddy bottom: and, in the Inner Harbour it is in about mid-channel, in from 12 to 10 fathoms, very soft mud, bearing from W.S.W. to West. Moor with an open hawse to the north-westward, from which quarter are the strongest winds, and the longest fetch you can have. There is a rise and fall of water here of between one and three feet; and we observed a current to set in and out every 24 hours while we lay here, but not regular in its change.

Water is to be got at the town from a well; and at about half a mile within Cape Lisuri, where there is a fine run of water, from which, by rafting it off, a fleet might water in a very short time. Very little wood is to be obtained, and it is, therefore, very dear.

From Point St. Nicolo, south-eastward, the coast is variegated; the greater part is bordered with a shoal, besides several rocky islets. *Cape Skala,* in latitude 38° 3′, long. 20° 47′, is the S.E. extremity of the island, and a rocky reef extends from it to the distance of more than a mile: the depths at a short distance from the latter are 6 and 8

* This steeple is square, and may be easily known.

fathoms.

fathoms. *Cape Capri*, the easternmost point of Cephalonia, is a league and a half N.E. by N. from Cape Skala, and the shelf along shore continues nearly to this point.

From Cape Viscardo, the North point, to Cape Capri, the eastern one, the general trend of the eastern coast of Cephalonia is S. by E. [*S.S.E. ½ E.*] and the distance 25 miles: but, at half-way in this distance is the semi-circular bay of Samos, 2½ miles wide, which affords convenient shelter. It has some ruins in its vicinity on the east, and is inhabited by fishermen.

ITHACA, the THEAKI of the moderns, seems to have re-assumed its antient name. It is nearly parallel with the N.E. side of Cephalonia, from which it is separated by a channel, which, throughout, is about one league in breadth, clear of danger, and has from 70 to 36 fathoms of water. At a league from the north end of this channel, and a mile from the Cephalonian shore, is an islet, *Dascaglio*, having a tower on it which serves as a beacon. The length of the channel is four leagues: on sailing through it, the hills on each side have a beautiful appearance. Along the coast of Cephalonia tents may be seen, regularly spaced, where the inhabitants watch boats and enforce the quarantine. *Point Marmaca*, the North point of Ithaca, is in latitude 38° 30′, and longitude 20° 39′.

The island, in 1827, contained 8,200 inhabitants; although composed, in a great part, of rugged mountains, it is well cultivated, and produces corn and currants. Its principal bay is the *Gulf of Molo*, half-way down the eastern side, and on the south side of this is the snug harbour and village of *Bathi*, or *Vathe*, the best in Ithaca.

The entrance of the Gulf of Molo is two miles broad, and has a depth of 130 to 100 fathoms of water in the middle, and no danger in any part of it. *If bound to the inner harbour, or port of Bathi*, steer in about S.W. until you get sight of a small round islet, lying within it on the South side. In entering, you leave this islet on the starboard side, and the course thence, up to the anchorage, is S.S.E. The points inside are all bold-to, and you will have, after passing the islet, from 40 to 30 and 25 fathoms of water in mid-channel. The entrance is nearly half a mile wide, but higher up the harbour is much narrower; in some places no more than 150 fathoms.

Mr. *Smith* described this harbour as easy of access with a leading wind, but difficult with a beating one; as it is too narrow to work a long ship in. There are rock-stones along both shores, where hawsers may be made fast for warping. The harbour forms a kind of basin, completely land-locked, and capable of holding a great number of ships. On the S.W. side of it, at about a cable's length from shore, is another small islet, on which is the lazaretto, and there is a passage between it and the shore with from 2 to 3 fathoms of water.

The best anchorage for men-of-war is to the N.E. of the Lazaretto Islet, in from 15 to 10 fathoms of water, soft muddy bottom. Observe not to go above the lazaretto with a large ship, as the water shoalens suddenly to 3 fathoms. You moor athwart the harbour with an open hawse to the northward and westward.

There is good anchorage at the head of the Great Bay, in from 25 to 10 fathoms of water, mud and clay, and also in *Skinos Bay* (on the south side of the entrance of the Great Bay) in from 38 to 20 fathoms of water, clay and sand.

Not being able to beat into the Great Bay, we anchored in Skinos Bay, in 38 fathoms of water, and rode out a very heavy gale from the N.W. and North points of the compass. There is a rise and fall of water here, of between two and three feet at times, but no regular tide that we could observe. The strongest winds that blow are from the N.W. and North.

Very little water is to be had in the summer season, and what they have is bad. In the winter there is a run at the head of the Great Bay or Gulf, where one or two ships might water. Wood is scarce and very dear.

By another intelligent hand Bathi has been described as follows:—"Vathé is beautifully situated. At the outlet of the bay, the rocks on either side are so close, that the whole appears like one circular lake, which, extending in the form of a horse-shoe, with a graceful bend, gives its figure to the town itself: this sweeps down close to the sea, there being no intervening object between it and the houses, save the road and the parapet wall of stone, which, in tempestuous weather, prevents the waves washing to the doors of the inhabitants. Over this wall you may lean, and see in the glassy wave the fish disporting merrily. Here will the crimson-spotted mullet, food for princes, bask in the sun, and, though

though naturally shy, permit the Greek maid to empty her pitcher near, without in any way showing alarm. At the very head of the bay is the governor's house, distinguishable by its green verandahs, and the flag of England waving before it; whilst close to this, if it be parade hour, you will see a little knot of British soldiers drawn up in front of their barrack. In the centre of the bay is the Lazaret, a regular and pretty building, whose communication with the land is by one solitary ferry boat. Around the lazaret lies many a little vessel at anchor: Albanian, Turk, Moreot, or Russ, each with its yellow ensign flying. All round the bay are eminences commanding it; those in rear either crowned by some old convent, some antique ruin, or gloomy cypress; those commanding the bay's outlet, surmounted by a half-dismounted battery.

"The celebrated *Fountain of Arethusa* is situated about five miles from Vathè."

PORT SKINOS has been described by Mr. Wood as follows:—This is a small but convenient anchorage for a few vessels, being completely land-locked and the shore free from danger. The depth of water for anchoring varies from 20 to 40 fathoms, muddy bottom. If you wish to moor in the shallowest depth you can make fast to the shore.

Beware, when working in, of the flaws of wind from off the land. I should recommend having the stream anchor ready to let go, as it would save you much trouble in the event of your being obliged to anchor in the deep water. The great advantage of anchoring in Skinos Bay is, that you can get to sea from it when you cannot from the harbour of Ithaca and the Gulf of Molo, in consequence of squalls and the unsteadiness of the wind.

Our stay here was only for a few hours, and not being in pratique prevented any other observations being made; but I was informed that northerly and N.W. winds bring heavy squalls from off the high land; and, that there was a well containing good water at the S.E. part of the bay.

ZANTE.—The ISLAND of ZANTE is separated from Cephalonia by a deep and clear channel, 7 miles in breadth; and the north end of Zante, *Cape Skinari*, bears from Cape Skala, S.W. [*S.S.W.* ½ *W.*]

There are now three lantern lights on Zante, viz., one on Cape Kieri, the south point of the island; another above the watering place on Point Krio Nera, the N.E. point; and the other near the town on the mole-head. The Light of *Krio-nera* is exhibited on a low quadrangular building, the lantern of which contains 15 lamps, constituting an improved light at 65 feet above the sea. The small light on the mole-head is only 28 feet above the same level; and caution is required that it may not be mistaken for the lights in the town of Zante.

The western part of Zante is highly mountainous, but the eastern part is mostly an extensive valley. The climate is fine in summer, but wet and cold in winter; in the latter season violent *borascas* or gales are common in the vicinity, with heavy rains. In Zante, says a late traveller, there is little to describe, and there is little variety in its productions. Currants are its staple commodity, as they give less trouble and more profit than corn. The want of grain and pasturage render it dependent, for the necessaries of life, on the Morea; but a constant supply of corn and cattle is obtainable. The town and port, on the eastern side of the island, are defended by a strong castle. The bay, which is large and capacious, is open to every wind except the West, and in a levanter is unsafe.

Zante was described by Dr. R. Walsh, in 1820, as the most beautiful and fertile of the Ionian Islands. It retains, he says, to this day, the epithet of '*woody*,' bestowed upon it by the antients from the earliest time, and presenting to the approaching stranger a rich scenery of leafy verdure, very different from the black and rugged sterility which marks other islands, both in the Ionian and Ægean Seas. Its climate is exceedingly mild and balmy; flowers are in bloom all the year, and trees twice bear ripe fruit,—in April and November: but the productions for which this island is most remarkable are currants and peaches: the first are sent all over Europe, principally from this island; and the latter are so large as to weigh 10 or 12 ounces.

It is the custom of the peasants of Zante to go over in the Morea in harvest-time to assist in reaping the corn. One year with another, *if permitted*, about 5000 persons annually migrate, and, being paid in grain for their work, return, it is supposed, with not less than 50,000 bushels.

The population, in 1827, amounted to 40,063; and, from the great number of very old people, it may be assumed that the air is, in general, salubrious. The greatest natural curiosity

curiosity in the island is a bituminous spring, the petroleum or matter of which is fit for all the purposes that pitch is usually applied to. Like all the adjacent countries, Zante is greatly subject to earthquakes; but they seldom are extensive.

The city of Zante, containing about 16,000 inhabitants, is, for its extent, entitled to the epithet of handsome; the houses are generally large, of hewn stone, built by the Venetians. With respect both to appearance and to the condition of the inhabitants, it may be described as a substantial place. The people have a cheerful confidence in their looks, which is always agreeable. To the praise of being industrious they are well entitled. The town is abundantly supplied with fine spring-water from open draw-wells in the streets.

From Cape Skinari, the north end of the island Zante, to *Point Krio Nera*, the north point of Zante Bay, the course and distance are S.E. ¼ S. [*S.E. ½ E.*], 13 miles. This is the course generally adopted. As a very large portion of the shore, toward the S.E., is bordered with a shoal, it is requisite to give it a berth of at least a mile, until you approach an islet, *Trenta-Nova*, which is a mile westward of Point Krio-Nera.* On advancing into the Bay of Zante, from the northward, approach not too near the point; because a rocky shoal extends from and about it to the distance of more than a quarter of a mile. On its edge are from 4 to 3 and 2 fathoms. The marks for clearing it are, the first hill to the southward of the north point of Zante kept a little open to the northward of the islet Trenta-Nova, until the east and west bastions of Zante Castle are brought on with each other; you may then haul up into the bay, observing not to pass Point Krio-Nera in a less depth than 7 fathoms, and then steer for the Mole-head.

From *Point Davia*, a bluff rocky point terminating the south side of the bay, a flat extends to about a cable's length; and both the west and south sides of the bay are bordered with flats, above one quarter of a mile broad, with from 2 to 2½, and 3, fathoms of water on them. There is also a reef at about half a mile to the northward from Point Davia, with no more than 9 feet of water on it, and from 3 to 4 fathoms between it and the shore: the marks for this reef are, the S.E. bastion of the castle on with the mole-head, bearing N.W., and the lazaretto, which stands on the south shore, S.W. by W.

In turning into or out of the bay, stand no farther to the southward than to bring the lazaretto on with a small round hill, a little way to the S.W. of it: there are three small hills, nearly together, but the middle one is the one here alluded to, as the mark for avoiding the reef.

The best anchorage is with the mole-head bearing from W.S.W. to West; Point Krio-Nera nearly North; and Point Basilika S.S.E. or S.E. by S., in from 7 to 9 fathoms, blue mud and clay, good holding-ground, but open to the eastward round from North to S.E. by S. Here is, at times, a rise and fall of water, of from 2 to 3 feet; but it does not appear to be a regular tide.

Water may be had on the N.W. side of the bay, near Point Krio-Nera, from a pipe, where the casks may be filled by the boats with hoses. Wood is very dear, and not always obtainable.

The S.E. Coast of Zante forms a considerable bay, in which are two islets, *Maratonisi* and *Peluso*, with several shoals. This bay, however, affords occasional shelter, and in its western part, within the promontory of *Kieri*, are the pitch-wells mentioned by *Herodotus*. These are, in shape and size, like common wells, and contain at top common water, which, though of unpleasant flavor, is drank by the neighbouring inhabitants. The liquid which they produce is, in every respect, like pitch, and overflows the fields around them.

The islet *Maratonisi* is on the western side of the bay, within half a mile of the shore. In 1810, two hermits inhabited this place, and occupied a square tower, situated in a garden planted with olive-trees, which commands a fine prospect of the country. The face of the islet being steep and high, is formed with terraces sown with grain, and here and there planted with olives. Among the rocks are many curious plants and flowers. The islet is connected to the main by a shoal bank, extending northward to the shore, and it thus forms, with the opposite coast, a snug and well-sheltered harbour, called *Kieri Bay*, in the entrance of which are 14, and within from 9 to 3, fathoms of water.

The islet *Peluso*, on the eastern side of the S.E. Bay, is a mile from the high shore on

* It is a small circular islet, with a white house upon it.

the N.E. It is surrounded by a shoal, and there is a sunken rock at some distance from it on the west. The general depths over the bay, between this and Maratonisi, are from 15 to 12 fathoms.

To a stranger making Zante from the S.E. it appears like two islands, in consequence of the valley's dividing the high lands; and we may notice that it is possible to mistake the eastern high land of the island for the land about *Mount Tornesé* to the eastward, on the main.

STAMPHANÉ or STROFADIA ISLES, the antient STROPHADES.—These are two islets lying at the distance of 8 leagues S. ¾ E. [*S. by E.* ¾ *E.*] from Cape Kieri, the south end of Zante, in latitude 37° 15′, and longitude 21° 1′. They are low, almost even with the water, and the ground about them is foul, especially on the western side. The southern, called the *Convent Isle*, is the largest: the other is merely a rock, called the *Harpy:* around the whole the water is very deep, and there is, within a short distance, from 40 to 50 fathoms. These islets are, therefore, still the terror of the neighbouring seamen; not, according to the notion of their fathers, as the dwelling of harpies, but as rocks on which their vessels have often been wrecked in stormy and wintry nights. Beyond these isles, the high and dark mountains of the Morea may be seen.

On the largest isle, a swampy patch of land, there has stood for many years a convent, or ecclesiastical rookery, inhabited by a considerable number of monks, whose sanctuary is defended by a battery, and supplied with water by some singular springs, which have given a kind of celebrity to the spot. This isle is about two miles long, and 1½ wide, with rocky cliffs and an indifferent anchorage of 15 to 7 fathoms, rocky bottom, at about a quarter of a mile south of the convent. The landing place is at a boat-house, in a small cove under the convent.

On the N.W. point of this isle is a lighthouse, a broad square building, tapering upward, which was first lighted on the 12th of December, 1829; the height of its lantern is 127 feet above the level of the sea, and it may, consequently, be seen from all points around. From the lighthouse the western extremity of Zante bears N. 15° W.; the summit of the Black Mountain in Cephalonia N. 2° W.; Mount Scopo in Zante N. 10° E.; and the summit of the isle Prodano S. 51° E., 10 leagues.

Sir John Franklin has said, "On the 15th of August, 1833, we approached within a mile and a half of the S.W. point of the Convent Island, on the N.W. end of which a very good lighthouse has been erected by the Ionian government. This light serves to warn ships of their approach to these islands, lying so directly in the track from Cape Matapan to Zante, or to ships bound to Navarin or Modon, from the N.W. or West. The light is good, and was seen at the distance of 12 or 14 miles. We could gain no soundings off the Convent Island at the distance of a mile and a half.

"Captain Swinburne landed on the island, to inspect the lighthouse. He found the light was attended, and the building kept in repair, by about forty priests, who inhabit the convent, the only residents on the island. Good water may be easily obtained there, as it flows from a spring underneath the garden of the convent. The priests have erected a kind of jetty or breakwater on the western side of the island, under the spring, to protect the boats as much as possible while getting water.

"This is the principal, if not the only, landing place on the western side of the island. Vegetables and fruit at certain seasons may be obtained in small proportions from these priests. The island abounds with grapes and olives."*

COAST of GREECE.—*The northern boundary of the* new KINGDOM of GREECE, according to recent arrangements, extends from the Gulf of Arta, on the West, to the Gulf of Zeitoun, on the East; in the greatest part of its extent this boundary is formed by the mountains. The kingdom is divided into ten departments, and forty-seven provinces; and it includes, on the East, the islands Skiathos, Skopelo, Khelidromi, Surakino, Joura, and Piperi, with Skyro, and the whole of the Cyclades.

FROM CAPE SKINARI, the north end of Zante, *Cape Papas*, the S.W. extremity of the Gulf of Patras, bears E.N.E. ¾ E. [*S.E. by E.* ½ *E.*] at the distance of 12¼ leagues. From Cape Papas, the island *Oxia* (already noticed) bears N.W. by W. 5 leagues; and *Point Bakeri* N.E. by E. 6¼ miles. The last point is 5½ miles from the unfortunate town

* *Nautical Magazine*, June 1834, containing a neat plate with views of the Light-houses.

of

of *Messolonghi*, or *Messalongia*, which stands to the north-westward, and will long be celebrated for its noble defence, in the siege of 1825 and 1826, against the Turkish and Egyptian armies. The town, in itself, is small and inconsiderable; and little more than a ditch sufficed, for a long time, to defeat the efforts of a powerful army. Messolonghi stands on the eastern side of an extensive lake, famous for its productive fishery, at two miles and a half from the sea. The whole of the coast westward from Point Bakeri, an extent of 17 miles, is low and sandy, with gradual soundings to the shore.

There is anchorage off *Fort Dogana*, near Messolonghi, in 14½ fathoms, at about 2½ miles from the fort. Mr. Wood says that, when he was here, the wind blew strong, but the holding ground was good, and the wind did not appear to blow home. But, in anchoring off this coast, or in any part of the Gulf of Patras, he recommends particular attention to the lead, as the water shoalens very suddenly; and if you do not reduce your sail early, you will get into shoal water before you are aware of it.

Cape Papas lies in latitude 38° 12½′, and longitude 21° 25′. The land, which, at two miles more to the south, is very high, declines to a low sandy point, which is terminated by a dangerous reef, extending more than a mile to the northward. Near the outer edge are from 10 to 20 fathoms, increasing quickly to 30, 40, and 50, fathoms.

PATRAS.—The city of Patras [ant. *Patræ*] bears E. by S. [*E.* ¼ *N.*] 17 miles from Cape Papas. The coast between forms a fine semi-circular bay, the shore of which is generally low, sandy, and clean, with gradual soundings and good anchorage all along, within the distance of two miles, with from 30 to 10, 6, and 3, fathoms.

Patras stands in latitude 38° 14′. It contains about 12,000 inhabitants. The town is pretty. It stands in a plain, which appears green and well cultivated, for about a mile and a half to the southward. The view hence to the northward is diversified by heathy hills stretching to the sea, beyond which are seen the town and castle of Lepanto. Immediately behind Patras rises a small hill, which is topped by a romantic castle, with a small battery. Behind it, and, indeed, in the back ground of the whole coast, rise very lofty mountains. To the northward of the town the ground is well cultivated, and the vineyards very fruitful. It is a pleasing sight to find them growing on the hedges at ten, and in some places five, feet from the shore. The currants are as fine as those of Zante. Vast quantities are annually exported. They are spread in bunches along the ground, and in eight days are sufficiently dried: the stalks are then picked off, and they are laid in heaps on the field ready for purchase. Of the country to four miles southward of the town, about a mile and a half is planted with vines; and the rest is marshy ground, with many and fine trees. These marshes secure to Patras a never-failing succession of aguish fevers during the hot months. There are a few cypresses in the fields, and but a few, as they are reserved for the burying-grounds. On the shore, close to the sea, is a fine hedge of alders, interspersed with some oleanders, which has a pretty effect.

The town, by the inhabitants called Batra, like every other Turkish town, is dirty, ill-paved, and unprovided: it is, however, famous over the Morea for its manufacture of leathern saddle-bags, which has succeeded to that of silken stuffs, for which formerly it was equally famous. According to Mr. Wood, the anchorage of Patras lies in latitude 38° 14′ 26″, and longitude 21° 46′ 31″. Variation, 17° 30′ West. The water here is deep, but the qualities of the ground much alike. Rivulets, under the town, along shore, supply good fresh water.

From Patras (*Batra*) the low sandy shore continues 2½ miles N.E. by N., where it forms a spit or point, and thence a slender bay, to the same distance; on the extremity of the latter is the *Morea Castle*, which defends, on the south, the Strait of Lepanto, or entrance of the Gulf of that name. On the opposite point, at the distance of only one mile, is *Roumeli Castle*, or the castle of *Lepanto*, nearly in ruins. The general depth of water between the two is from 30 to 35 fathoms, but on the western side of Roumeli castle, the water is shallow.

Patras was visited by H. M. S. *Rainbow*, Captain Sir John Franklin, in December, 1832, and it was found that the snow remained stationary on the tops of the mountains after December began, and it occasionally descended as low as the lesser hills behind Patras, but at that time seldom remained in these places longer than a few days. When snow fell in any quantity on the hills they had small rain at the anchorage, with very raw cold weather; the thermometer being occasionally as low as 36° in the warmest part of the day. The N.E. winds prevailed also in this month, and often blew very strong. Once only, on the

the 5th of December, a gale from the S.W. was felt at the anchorage, and this came in a very violent gust, like a whirlwind, by which two water spouts were raised. Heavy lowering clouds, vivid lightning, and peals of thunder, preceded, and gave such timely warning of the change, that any ship might have shortened sail.

The weather was, in general, fine during the months of January and February, but often very cold, the thermometer falling occasionally as low as 30°, at which time not only the mountains but the lesser hills were covered with snow. The N.E. winds were frequent, and often blew with violence along the Roumelian shore, while on the Patras side they came only as fresh breezes, to which double reefed topsails and top-gallant sails might have been carried. In the month of March the weather was more unsettled and the winds were variable; after the middle of the month there were strong breezes from the S.W. for three successive days.

The north side of the Gulf opposite to Patras is called by the Greeks the Bay of *Krio-nera*. Here the Turkish fleet formerly anchored near the base of a high peaked mountain, *Palæo Vouna*; and here, at three quarters of a mile from shore, the *Rainbow* found only 5 fathoms of water, and she anchored in 4½ at about half a mile from shore, with the extremity of a sandy spot that forms one point of the bay S.W. by W.; the steep and bluff cape of Palæo Vouna, that forms the other point of the bay, E. ¼ S.; castle of Patras, S.E. ½ S.; Cape Papas W.S.W. In this situation there were only 3⅛ fathoms at a hawser's length astern, or in-shore of the ship; and when they had veered to 72 fathoms on the best bower, in consequence of a violent gale coming on from the east, there were 3¾ fathoms on each side and astern, and four under the bow, with space to veer to 50 fathoms more cable before they could reach the ship's draught of water, 16 feet. The gale sent in a very heavy swell, which prevented the ship being cast to seaward, and compelled her to remain at her anchors, the small bower having been also let go. The gusts rushed down the mountain like a hurricane the whole night, bringing with them great quantities of sand, and even gravel; and it was every moment feared that the ship must have been driven from her anchors, in which case her destruction would probably have followed. The wind became moderate in the morning, and they were fortunately enabled to cast the ship to seaward and stand over to Patras, where it was found that the gale had been equally violent on that side of the gulf, that three vessels had been driven out to sea, and several houses blown down.

Captain Franklin adds that, "Though the ground in Krio-nera Bay is excellent for holding, I should not at all recommend any ship anchoring there, as they would, most probably, be caught in the strong N.E. winds. Nor is it adviseable, on this account, for ships to anchor on any part of that coast between Messolonghi and the castle of Roumeli."

At this time the Morea castle, a very strong fort, was in good repair: there were 13 guns mounted on it, fronting the sea, or that could, at different angles, bear on a ship. The Roumeli castle, very much out of repair, had three guns facing the sea. The only apparent danger in the strait, between the castles and Vostitza, is a very dangerous spit extending from Point Drepano, on the south shore, nearly opposite to Lepanto. This must be carefully avoided; which may be done by keeping in mid-channel or nearer to Lepanto.

Just to the eastward of Lepanto is a sandy spot and a line of low shore which must not be approached too closely. In beating up or down, a ship should not stand nearer to this long low point than in 14 fathoms, as the water shoalens suddenly; but a ship will be well clear of this shore by keeping mid-channel or by using the lead carefully when standing toward it.

Above Drepano the shore is bold all the way to Vostitza, and may be approached without fear. There are two or three bays in this part of the coast, formed by projecting gravelly points, but the water in all of them is deep; and it is doubtful whether they could, with safety, be used as an anchorage, except as stopping places in a S.W. gale.

LEPANTO or NAUPAKTOS.—At 3½ miles to the north-eastward of the Morea Castle, and on the north shore of the gulf, is the little town, or rather village, of *Lepanto*, by the Turks called *Enebachté*, and by the Greeks *Naupaktos*. It is built on the side of a hill crowned by an insignificant castle, which is commanded by another hill to the north. The town, on the land side, has an ancient wall, with two gates, and a small garrison. The harbour is fit only for small craft, having a depth of 5 feet, and an entrance of about 100 yards broad, which is occasionally closed by a chain. The fields around the

the town are cultivated and sown with Indian corn, grapes, and water-melons. The soldiers speak Greek, as do all the Turks in the Morea, and very few are acquainted with the Turkish.*

VOSTITZA.—At 4½ leagues S.E. by E. [*E.S.E.* ½ *E.*] from Lepanto, on the southern shore of the gulf, is the town of *Vostitza*, on the site of the antient *Ægium*, the only town of any consequence on that coast, and the principal place of a district bearing the same name. *The Bay of Corinth* is 12 leagues to the south-eastward of Vostitza, and in sailing along between these places, the country of the Morea presents a varied mountainous aspect, here and there patched with cultivated fields, which, with a few hamlets, serve to show that it is not entirely deserted by the rural population.

The Bay of Vostitza is open to the northward, and formed by two projecting points about two miles apart. The water here is very deep; the first soundings gained will be about 30 fathoms, at three quarters of a mile from shore, and the best anchorage for a ship is in 17 fathoms, about 500 yards from the western shore and 500 yards from the custom-house on the beach at the head of the Bay. A ship moored in this situation will ride in safety, as the ground is very tenacious mud, and the winds, though they blow most violently at times from the N.E. and S.W. on the outside, scarcely ever reach home, nor send in a swell sufficient to hurt a ship. S.W. winds produce the greatest swell, hence it is advisable to anchor nearer to that side of the bay than in the centre of it. In 19 fathoms, the bearings were, the N.W. point of the bay N. 27° W.; East point of the same N. 82° E.; the noted plane tree S. 11° E. Here the ship rode out heavy N.E. and S.W. gales without experiencing inconvenience. In weighing anchor a purchase was required. Latitude of the commandant's house by the great plane tree, 38° 15′ 18″; long. E. 22° 11′ 40″.†

The town is well supplied with excellent water, the principal fountain being close to the plane tree. Fresh provision may be obtained. The town, having no fortress, is small and straggling, built on the hill above the beach; it contains three or four good houses. The storehouses of the merchants and the custom-house are on the beach; and merchant ships lie close to the wharfs. This place is the great depôt for the shipment of currants in the Gulf of Lepanto, and those not grown in the vicinity are brought hither in small Greek boats. The English merchants are almost the only purchasers of this fruit, though a small part is sent to Trieste in Austrian and Greek vessels. The quantity purchased by the English merchants in 1832 was sufficient to load 12 or 13 vessels, averaging 150 tons, all of which were sent to London. The duty on the export, in the same year, amounted to £98,000.

Sir John Franklin has described the set of the current, as well as the rise and fall of the water, in the Gulf of Lepanto, which he says depends on the direction and force of the winds, the current running most strongly when the wind blows down the gulf. At Vostitza it was found that a strong S.W. wind brought in such a body of water as to cause a rise on the beach of two or three feet, and that a gale from the N.E. caused a considerable falling of the water, but not quite equal to the rise produced in the contrary direction.

The Currents in the Gulf of Patras, particularly toward the head of it, near the town, are likewise governed by the wind, and follow its direction; but, after a N.E. wind has blown with violence for some hours, and the body of water it has brought down the Gulf of Lepanto has been thrown on the steep shores of the S.W. side of this gulf, a re-action in the water generally takes place, and the current returns against the wind to the N.E. Similar effects are produced by a continuance of strong breezes from the N.W. and S.W.; the water is carried rapidly at its commencement to the N.E., and forced into the Gulf of Lepanto till a re-action takes place, and then the current returns to the S.W. or westward, against the wind. In calm weather it was remarked that the drain of the water at the anchorage before Patras was more frequently to the N.E. than otherwise, though it has often been observed running to the S.W. and S.E. The Greek boatmen say that, in moderate weather the current is, in general, still about noon, and again from 7 to 8 p. m., which was occasionally confirmed, but not so generally as to induce the supposition that the current partakes of the nature of a tide, which its regularity of ceasing to run at those times would imply.

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* Mr. Turner observes that, *vice versa*, of the numerous Greeks in Anatolia, very few can speak any other than Turkish.

† Not 22° 4′ 40″, as given in the 'Nautical Magazine,' to which we owe these extracts.

The

The boatmen likewise say that the current almost constantly runs to the westward from Point Bakari,* or downward along the shore in front of Messolonghi as far as the isle *Oxia*, a distance of more than six leagues; and that the current takes a contrary direction, with almost equal uniformity along the S.W. side of the gulf. They recommend that, in these seasons, ships in beating up the gulf should keep nearer to the S.W. shore after they have gotten well round and above the reef that extends from Cape Papas, the N.W. point of the gulf; and that, in beating out of the gulf, they should work on the Messolonghi shore.

Between the months of April and September it was observed that, however strong the wind may have blown during the day it almost constantly abated at sun-set, and that the wind had blown from the land during the night; on this account the boatmen and small vessels almost invariably leave Patras in the evening on going to Zante or any of the islands.

"During the month of October the winds were blowing almost constantly down the Gulf of Lepanto, and generally with much force during the day, though they became moderate in the night. These N.E. winds came down very strong in November, though we have heard that the winds on the outside, which were blowing at the time from S.E. and S.W., being turned from these directions by the mountains that are near the gulf in the Morea. Contrary to the course in the preceding month, these winds did not abate during the night, but appeared to blow with nearly the same force down the gulf, and along the north shore of the Gulf of Patras; though at the anchorage before Patras it was generally either a moderate breeze or calm during the night, with occasional squalls of short duration. While these winds continued, no vessels could have beaten into the gulf, even the small trading boats were detained at its entrance many days. The current was running so strong to windward the whole of this time at the anchorage before Patras, that the ship seldom rode head to wind even in very strong squalls. The meeting of the current and wind caused the whole of the north side of the gulf below the forts to be in a foam, and also a considerable swell at the anchorage before Patras. The reason of this strong current we suppose to be, that the wind in the offing had been blowing strong from S.W., and prevented the escape of the water from being carried down this gulf by the N.E. gales.†

The WESTERN COAST *of the* MOREA, *from* CAPE PAPAS, SOUTHWARD.

CAPE PAPAS has already been described on page 187. From this cape the western coast trends to the S.W. by S., South, and S.W. by W., 20 miles, to *Cape Clarenza*. The greater part of this coast is a low sandy beach, which commences at 2½ miles to the southward of Cape Papas. This beach is, however, interrupted at 4 miles farther South by the headland and rocky cliff of *Konopoli*, which extends to the distance of a mile. At 5 miles farther is the lagoon and fishery of *Kotiki*, which covers an extent of two miles, and the southern part of which is about 8 miles from Cape Clarenza. It is a fresh water lake, communicating with the sea by only one narrow channel.

CAPE CLARENZA or CHIARENZA, is a rocky promontory, having a frontage of half a league, facing the N.W. It is surrounded by rocks, and off its western extremity is an islet, that of *St. Giovanni*, (St. John). On the land above is Clarenza, in 1810 consisting of a custom-house and two cottages only, in the vicinity of which are remains of a fortress, and the shapeless ruins of other buildings, on the site of the antient *Cyllene*.

PASSAGE EASTWARD OF ZANTE.—In a line between Cape Clarenza and the north end of the island Zante, at 7 miles from the former, and 13 from the latter, is the *Montague Shoal*, which is formed by a dangerous bed of rocks, consisting of two distinct patches, in a N.W. and S.E. direction from each other. The following remarks on them were written by Mr. W. Parker, of H.M.S. *Meteor*, in 1830.

In sailing from Zante Bay, and being bound to the northward, with a northerly wind,

* The point about 5 miles to the S.E. of Messolonghi.

† For the interior of the Gulf of Lepanto to the Bay of Corinth, see our larger Directory, vol. ii., pp. 49—51.

stand

stand over toward Cape Clarenza, in order to avoid the baffling winds under the lee of the Black Mountain of Cephalonia; but, in doing so, take care to avoid the *Montague Rocks*, which lie in a direct line between Cape Skinari, the north end of Zante, and Cape Clarenza. They bear from Cape Clarenza W.N.W. ¾ W., and from Cape Skinari E.S.E. ¾ E. At night you will see the light on the north point of Zante Bay [Point Krio-nera]. This light must not be brought to the westward of S.S.W., which will clear them to the westward.

The least water on the Montague Rocks is seven feet, and there is not more than 15 or 20 fathoms for a quarter of a mile around them.

If bound from Zante to Corfu, it will be adviseable to pass between Zante and Cephalonia, as the channel within the islands is subject to calms, and a vessel may be becalmed for two or three days there while a fine breeze is blowing outside.

Mr. *Thos. Elson*, M. R. N., has given the following marks for clearing the Montague Reef:—St. George's Castle, in Cephalonia, on with the high bluff of Cape Skala, leads half a mile to the northward of them. Great Hill open to the westward of Mount Keri leads to the eastward of them.

From the Shoal, Castel Tornesé, on the Morea, is seven miles distant, and its declivity to the southward or right, over the middle of the white cliff, bears S.W. by W.; the foot of Mount Skopo is seen to the S.E. of the town of Zante; and the citadel of Zante bears S.W. by W. nine miles distant.*

From Cape Clarenza the coast extends two leagues S.S.W. [*S. ¾ W.*] to *Cape Tornesé*, the antient *Chelonites*. The interior land is very high, though it declines to a low shore, bordered with foul ground. On the summit of the land stands the *Castel Tornesé*, an old Venetian fortress, and under it is a creek that affords occasional shelter to small vessels.

From Cape Tornesé to Cape Katakolo, the next projecting headland, the bearing and distance are S.S.E. ¼ E. [*S.E. ¼ S.*] 5½ leagues. The coast between forms a bay, called that of Tornesé, being bounded by the Cape on the North: its shores are low and wooded. The village of *St. Nicolo* is on the south side of the cape, on a cove between two hills, and near it is a hamlet of Greek fishermen.

At two leagues eastward from Cape Tornesé is the mouth of the *River Iliako*, the antient *Peneus*. At 2½ miles inland, and northward of this, was *Gastouni*, not long since one of the best towns of the Morea, but now reduced, by repeated contests, to a heap of ruins.

Cape Katakolo is an elevated tongue of land extending two miles true South from the main land. A reef projects from its south end to some distance outward. The cape forms a bay on the East, upon the N.W. side of which is the village of Katakolo, over which is the Castle (Castro) Pondiko.

GULF of ARCADIA.—The slender and open bay, which bears this name, extends from Cape Katalolo to Cape Konello, a distance of 10 leagues S. by E. ¼ E. [*S.S.E.* ¼ E.] Its shore is generally low, but gently rises into elevated land. The lagoon and fishery of *St. Giovanni* is at a league from Katacolo; and, at 7 miles from the same cape is the mouth of the *River Rouphio*, the antient *Alpheus*, one of the largest rivers of the Morea. The country here, with its rich fields and verdant mountains, is enchanting.

PYRGO.—At about 4 miles to the North, from the mouth of the Rouphio, is *Pyrgo* or *Pyrgos*, a town containing about 1000 houses, and having a bishop bearing the title of *Pylos* and *Olenos*. The country between it and the sea is a plain, richly cultivated. The town is pretty, and commands a fine view of the valley and the sea.

At half a league beyond the Rouphio, to the S.E., is the lagoon and fishery of *Giagiapha*, extending thence about 4 miles; a smaller one, named *Kaiapha*, is 4 miles farther on in the same direction. From the latter the village of Arcadia, the antient *Cyparissa*, is distant nearly six leagues. Arcadia now has little to recommend it but the name and the beautiful prospects in its vicinity.

From Cape Konello, at 10 miles S.S.W. ¼ W. [*S. by W.*] is the isle *Prodano* [ant. *Prote*] which is two miles long, from North to South, and more than a mile from the main. In the channel between is a good road, in the depth of 16 and 17 fathoms: the best anchorage is about the middle of the island; for both within and without the water is

* A beautiful engraving of these marks is given in the *Nautical Magazine*, No. 19, Sept. 1833.

very

very deep; here you will be exposed to south-westerly winds only. The island is uninhabited and covered with heath, but affords a quantity of salt. On the shore of the main, in the port, is, or was, a Greek inscription, signifying that those who remained in the strait at night, if they do not keep a good watch, may be in the hands of corsairs before morning. The old town of *Navarino* [ant. *Pylos*] is two leagues to the southward of Prodano.

NAVARINO OR NAVARIN.—The harbour of Navarino, one of the best, if not altogether the best, in the Morea, extends to the southward of Old Navarino. It is formed, in front, by the narrow isle called *Sphagia*, the antient *Sphacteria*, which is three miles in length. The entrance, which is at the south end of this island, is less than a mile broad, but the harbour widens upward to three miles, and its general depths, with the exception of two shoal spots, are from 27 to 12 fathoms.

NAVARINO, or *Neo Castro*, on the S.E. side of the harbour, formerly contained 6000 inhabitants, who, at the commencement of the bombardment by the Egyptians, in 1825, retired into Arcadia. The harbour is so spacious, and so secured from the sea by the island Sphagia, as to be capable of receiving a numerous fleet.*

The *Pylos Rocks* extend to a considerable distance from the south end of Sphagia, and narrow the entrance to the harbour. Hence it is requisite, when sailing in, to keep nearest to the main or eastern shore. When in, you may anchor behind the island, in from 5 to 15 or 20 fathoms. Ships bound in, from the southward, generally take a pilot at the island Sapienza.

MODON, &c.—The town of *Modon*, once a place of great trade, is 4½ miles to the South of Navarino. The land between is elevated; and near the middle of it is the church of St. Nicolo. From the point on which stands the town of Modon, the island Sapienza is only a mile distant, and the greater part of the channel between is obstructed by a spit or reef extending southward from the north shore; but between its extremity and the island, is a depth of 13 fathoms, which increases inward.

The ISLAND SAPIENZA is 4 miles long, from North to South, and its South point, which may be properly called *Cape Sapienza*, is in latitude 36° 42½′, longitude 21° 40½′. It is moderately high and well inhabited. The land rises gradually, in uneven lines, from its extremes to the centre. On its S.E. side is a little harbour, *Port Longona*, having before it an islet of the same name, and within it from 10 to 5 fathoms of water. The North side of Sapienza forms the south side of the port of Modon, wherein you may anchor, before the town, in 5 and 6 fathoms of water, on clean ground, well sheltered.

A vessel bound into Modon Bay, to sail between Sapienza Island and the castle, should keep near to Sapienza, in order to avoid the spit above mentioned. You will not find any ground until you get near the island or the castle, and then you will suddenly find 20 to 15 and 10 fathoms, after which you may find no bottom with the hand-line. The greatest depth between Sapienza and the main is 22 fathoms; but, the best riding is on the Sapienza side, where you will have very clear ground and good anchorage, in from 15 to 5 fathoms; the latter depth being close to the shore of Sapienza. You may, if you choose, ride with a hawser on shore. There is a white path from the top of the island to the sea-side, opposite to which you may anchor, or a little farther to the eastward. You may also lie farther out, in 19 or 20 fathoms, with the castle bearing N.N.W., the N.W. point of Sapienza N.W. by W., and eastern point of the same S.S.E. *At Sapienza pilots are generally engaged for the Archipelago, &c.*

Upon the western or castle point of the entrance to Modon a lighthouse is marked on the charts, but whether it has been lighted since the late hostilities we have not been informed, and suppose that it is discontinued.

The ISLAND CABRERA is three miles south-eastward from Sapienza; it is four miles long from North to South by two in breadth, and is of a quadrilateral shape. From most directions it appears like a high lump of land, in a circular form, which serves as an excellent mark for those bound to Koron, &c.

REMARKS FROM MR. WOOD'S JOURNAL.—*In sailing into Modon*, from the north-westward, a good berth must be given to the Castle Point, as there is a rocky ledge, stretching nearly half way across in a S. by W. direction, with only two fathoms of water. There is

* In the night of Nov. 18, 1829, (at 11, 30 *p. m.*) a dreadful storm broke over Navarin. The lightning fell upon the citadel, and setting fire to the powder magazine, blew it up with all the walls and buildings in the inclosure. The injury extended to a great distance beyond, principally in the town, where not one of the wretched huts that composed it remained habitable.

also

also a patch of rocks, with 5 fathoms, at about 2½ cables' length from the N.W. point of Sapienza, on which a few casts of this depth has been found, and thence abruptly 18 and 21 fathoms.

We anchored, says our informant, with the Castle of Modon N.W. by W., Peaked Hill N. by E., and a small brown island S.E. by E., in 9 fathoms, muddy bottom; the soundings are very regular. The bay is exposed from S.W. by S. to N.W. by W., and S.E. is rather open. It appears to be a very unsafe anchorage. The best ground is between Sapienza Island and the grey cliffs on the main, in 18 or 19 fathoms, good holding ground; this spot is quite safe, and a good place to take shelter in, if caught in a southerly gale. In working between the island and the main, care must be taken to avoid the following shoals, not noticed in the charts; and, as the land is high, and of a bold appearance, few would suspect any danger.

Off the east end of Sapienza there is a shoal of from 3 to 2 fathoms, forming a horse-shoe, about 2½ cables' length in extent. The depth suddenly changes from 17 to 5 fathoms, and then to 12 feet.

There is a bay between Port Longona and the East point of Sapienza, with 2½ and 3 fathoms at 1½ cable's length from the shore. Off the N.W. point of Cabrera is a shoal of about one cable, which may be seen in passing. Between the islands of Cabrera and Sapienza, and nearer the latter, is another, not laid down in the charts; the best passage is between it and Sapienza; not between it and Cabrera.

Care must be taken, if working up to Modon, not to stand too near the white cliff on the *main* side, as there are many patches at two cables off from shore, with only 12 feet over them. The water suddenly shoalens from 13 to 7 fathoms; then you will be on shore. The channel, from shore to shore, is about two miles broad. The Bay is defended by an octagonal castle, with two tiers of guns of small calibre.

Port Longona or Longa, is on the S.E. side of Sapienza. Two small islets in front form the port. On going in these islets are to be left on the starboard hand, and here from 12 to 9 fathoms will be found. Do not attempt to pass to the northward of the islets, as there is a depth of only 10 feet where the chart gives a clear passage. H.M.S. *Columbine* was once sailing through this passage, with a pilot on board, when the look-out man, observing the shoal appearance of the water, gave them time enough to let go an anchor and bring the vessel up all standing. The port is sheltered at all points but S.E. by S. and S.E., at which points a great deal of sea must set in. The general depth is from 7 to 6 fathoms, good holding ground, and sufficient room to moor with 50 fathoms of cable on each of your anchors.

Cape Gallo lies at the distance of two leagues East from the S.E. end of Cabrera; the land thence trends 3½ leagues to the N.W., and again to the same distance, westerly, to Modon. So that, with the islands of Cabrera and Sapienza, it forms a large gulf, in the greater part of which there is deep water, very nearly to the respective shores. In one spot, at half a league from the N.E. end of Cabrera, Captain Smyth found 106 fathoms.

GULF of KALAMATA or of KORON.—The islet Venetico, which lies at about a mile to the southward of Cape Gallo, marks the west side of the entrance to the Bay of Kalamata. Venetico is a mile long, and about that distance to the South from it is a cluster of rocks, called the *Formigas* or *Ants*. A vessel may sail between Cape Gallo and Venetico, taking care only to avoid a shelf extending from the North side of the island. There is also a deep channel between Venetico and Formigas, giving the shore a berth. Cape Koron, on which stands the town of that name, is 7 miles N.E. from Venetico. It is a tongue of land, extending half a league to seaward. Koron was, until late years, one of the most commercial towns in the Morea, but it has, with its fortress, been nearly annihilated. The latter stood near the extremity of the land, and immediately under it the town, at the foot of a gently descending hill.

An officer, who visited this place in 1816, describes the eastern side of the Gulf as remarkable for high craggy mountains, the country presenting to the eye a very rugged and unsocial appearance. On the Koron side its appearance is very different, and is that of a fertile and delightful country, within two miles from the sea, covered with olive grounds, &c. Though ill cultivated, it forms an interesting scene to the mariner.

On the parallel of the isle Venetico the breadth of the entrance of the gulf is 7 leagues. On advancing to the Gulf from the westward the most conspicuous marks will be the islands of Sapienza and Cabrera. There are, also, two high peaks of land to the north-

ward of Koron, resembling two hay-cocks, and at the very bottom of the Bay or Gulf may be seen a very high round mountain, having the appearance of being insulated from the main.

The best anchorage near Koron is within a mile of the town, in from 15 to 20 fathoms of water, light sandy bottom, with the castle or fortress S.W. by S., the watering place N.W. by W., and *Cape Grosso*, or the south-easternmost land in sight, S.S.E. ½ E.

In hauling into the Roads of Koron a berth of one mile should be given to the table point, as there is a break with irregular soundings, and in some places only 3 fathoms, stretching off in an easterly direction. Bring the point to bear S. by W. about one mile and a quarter, and anchor in 16 fathoms, where there is good holding ground.

The Road is sheltered from south round to the westward as far as north, but is much exposed to the rest of the compass. The castle of Koron is an old Venetian building, situated in an admirable position; but for what purpose is not clear. The country around is exceedingly fertile, and there is a small fountain on the eastern side of the fort, which, it seems, yields small supplies of good fresh water.

Wood may be obtained here at a moderate price; and in the vicinity good water may be had in any quantity. The most eligible watering place is about two miles to the northward of the town; there is another at about three miles, a very spacious one, near which is good anchorage. Both places are at rivers near to the sea, so that the means of filling are either by rolling casks into the water, or by a very long hose from the boats in moderate weather: when the wind is off the land, the casks may be rafted off with safety; with a sea-breeze, it is best to have a grapnel in the boat. It was observed that, with a swell or rise of the sea, at the northern watering place, the water was a little brackish, for a few hours out of the twenty-four; but it is presumed that this may be avoided by rolling the casks higher up. Fresh provisions, fruit, and other refreshments, were abundant.

The Rivers Bias and Pyrnatza empty themselves near the head of the Gulf, which is 13 miles to the northward of Koron; but the latter, the most considerable, has not water at its mouth even for a boat; though it has abundance of fish, and particularly lobsters, some of which are of very extraordinary magnitude. At two miles hence is the village of Nissi or Nisi, and three miles farther, eastward, is KALAMATA, from which the Gulf takes its modern name. This town, which is about half a league inland, near the River Apseria, had, not long since, about 5,000 inhabitants.

KITRIES, &c.—At two leagues South from the Dogana or Landing of Kalamata are the remains of *Kitries*, formerly the chief town of the *Mainotes* or people of *Maina*, whose country extends to Cape Matapan, the southernmost point of Europe, in latitude 36° 21½′, longitude 22° 28′. These people inhabit the mountainous tract of Taygetus, between the Gulfs of Kalamata and Kolokythia.

THE BAY OF KITRIES lies N.E. by E. twelve miles from the castle of Koron. This bay is about two miles long and one mile deep. The water is very deep, and there is anchorage in 26 fathoms, excellent holding ground. The soundings are quite regular up to the beach. Small vessels anchor close to the shore, in 15 fathoms, and moor with their streams to the rocks. The winds from W. by N. to N.W. blow right in. There is no danger in this bay, and it would be a desirable anchorage but for the great depth of water. A small supply of fresh water may be obtained from a fountain near the beach.

CAPE KEPHALI, SOUTHWARD.—From *Cape Kephali*, which is immediately to the southward of Kitries, the coast trends to the south-eastward, about five miles, and here may be found Kardamyla, a village of about 100 houses, over a cove protected by an islet. Two miles southward from this is *Point Stupar*, from which a reef extends half a mile out. At 10 miles South from Point Stupar, in lat. 36° 39½′ is PORT DJIMOVA or VITYLO, the best road on the eastern side of the Gulf. The harbour is about a mile and a half deep, by half that breadth. Its little village or hamlet is to the N.E. On approaching, no soundings will be found until you are near the shore, there being a depth of 120 fathoms at a short distance from it. At a league out, Captain Smyth found 479 fathoms. Within the harbour are 10, 8, and 4, fathoms. The course in is nearly East. On the north side are three or four round hummocks, and another on the side of a mountain, toward the southward; in going in you will also see a high round hill, apparently in the middle of the harbour, which will then be fairly open. You may run in without fear of danger. The land, in general, about this harbour, is high, mountainous, and barren.

MAINA, &c.—The high cliff of *Cape Grosso* commences at three leagues to the southward

ward of Port Djimova. The land between is irregular, rugged, and mountainous. N.E. of the cape is the little port and village of *Maina*, containing about one hundred houses. From Cape Grosso the same rugged land continues to *Cape Matapan*, where it terminates in a high steep pyramidal point, the base of which is cavernous, and blackened by the fire of antient volcanoes. On it are the ruins of a temple of Neptune, and near it a depth of 90 fathoms. At about two leagues northward from the extremity of the cape the land falls very low for a short space, when it again rises very high and hilly; so that to those coming from the westward the cape, at first, appears like an island, but on approaching the difference will be seen.* At 4 miles N.W. [*N.W. by W. ½ W.*] from the point of the cape is an islet, called *Ranesta*, with some rocks extending from it to the southward. These must be carefully avoided, as they are bold-to: the distance between them and the nearest shore is two miles, and the depths in mid-channel 100 to 70 fathoms.

GULF of KOLOKYTHIA.—From Cape Matapan the N.W. point of the Island *Cerigo* bears E.S.E. ¾ E. [*East*], 21½ miles, and the S.W. point of the Island *Servi* E. ¼ N. [*E.N.E. ½ E.*], 22½ miles. The space between, northward of the latter, is the entrance of the GULF of KOLOKYTHIA, which is bounded on the west by the *Braccio*, or peninsula of *Maina*. The bottom is altogether deep, and no soundings to be found, at 350 fathoms, two leagues from shore.

The Mainote shore is entirely rugged and mountainous, as we have before noticed, but it has three harbours: of these, the first and smallest is *Porto Quaglia*, or *Kallio*, at a league from the extremity of Cape Matapan, where a vessel may find shelter during a westerly wind. The next is that of *Kalokina*, 11 miles more to the northward, and open to the south, but there is a small shoal of 4 fathoms to the southward of its eastern point. *Port Pagagna*, or *Pagania*, the largest and best of these harbours, is divided from that of Kolokina by an elevated peninsula, half a league in breadth. Here ships may lie safely in all winds. The harbour is circular, open to the S.E., about half a league broad, and its depths are from 20 to 7 fathoms. It may be known by a red point on the south side of the entrance, and a castle which stands on the north side. There is no danger in sailing in, and you may anchor where you please, on good ground. The entrance bears from *Cape Spati*, the north end of Cerigo, N.W. ¼ N. [*N.W. by W.*], 26 miles. The village of *Scutari*, which has been strangely misrepresented on the charts, is situated upon elevated land, on the N.W. of the harbour; its shore is rocky.

MARATONISI.—Two leagues to the N.N.E. from Port Papagna is the village of *Maratonisi*, which stands on the main above a rock that overhangs the sea; it has about 500 houses built of stone, and with but one story, with a castle and a large square tower on the highest part of the rock. Half a league to the northward of Maratonisi Point is an islet, which forms a roadstead, sheltered from northerly and westerly winds.

The *Vasili Potamo* or *River Eurotas* empties itself into the head of the Gulf, and is navigable for large boats to some leagues up the country until crossed by a ledge of rocks. Upon a branch of this river, about 8 leagues inland, is the city of *Misitra* or *Mistra*, near the site of the antient *Sparta*.

On the eastern side of the Gulf, at 11 miles to the northward, from the Island Servi, is the harbour called *Port Rupina*, in which a few vessels may be sheltered on the North, the East, and West. It may be readily found by the elevated land which bounds it on the larboard hand, and behind which you may anchor in from 10 to 7 fathoms.

SERVI, &c.—This small but elevated island (mentioned above) was once connected, by an isthmus, to the main, and the strait has still a rocky bank, over which there is no passage. This island, with the coast of the main on the north and east, forms a bay, one league and a half broad, and of equal depth, the *Bœaticus Sinus* of the antients, and now the *Bay*

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* CAPE GROSSO is a high bluff, with red perpendicular cliffs. There is a piece of table land stretching to the N.E., the end of which falls suddenly in a short space. The land again slopes to a deep valley, and then rises very mountainously to the southward. Between the cape and the mountain is a town, with several square towers. At S. by E. ½ E., about three miles from the cape, is *Renesta*, a small islet.

CAPE MATAPAN is a long sharp point of land, moderately high, and, at a distance, resembling an island: but the land above is high, and appears something like the *Deadman*, on the coast of Cornwall. As you approach the cape you will see a tower in the gap. With strong northerly winds, and near the land, violent gusts come off in various directions. To the northward of the cape there is anchorage for small vessels.—*Wm. Wood.*

of

of Vatika. The land around is an amphitheatre of mountains. There is anchorage in different parts of the bay, and particularly at a mile S.E. from the tower on the N.W. coast, where the water shoalens from 30 to 12 fathoms. The village, *Vatika*, from which the bay takes its name, is upon elevated land on the N.E., and the coast thence southward is all along bordered with rocks. From the south point of Vatika Bay to CAPE MALEA, or *St. Angelo*, the coast, which is high, trends nearly true *East*, two leagues.

The N.W. side of the Bay of Vatika is an excellent place to take shelter in when strong winds blow down the Archipelago. There is anchorage in 15 fathoms, muddy bottom, about a mile and a quarter from shore, with Cape Vatika S.S.E.; the S.E. point of the Isle Servi S.W. by S.; Saddle Mountain N. by W.; and the high point of Cape Matapan over the low part of the Isle Servi, bearing West.

The land is low next the sea. The bay is open from S.E. by S. to S.S.W. Small supplies of cattle, and water from a reservoir, may be obtained. It has been reported that, off the south end of Servi, and off Cape Vatika, are some rocks, but lying close to the shore. On the S.W. side of the island there is anchorage in from 5 to 10 fathoms.

CERIGO or KERIGO.—This island is separated from Servi by a deep channel, 5 miles in breadth. Cape Spati, the north end of Cerigo, is situate in latitude 36° 28′, and longitude 22° 57′; Cape Capello, the south point, in lat. 36° 7′, and long. 23° 4′: the distance between the two is, therefore, 17 miles.

Of *Cerigo*, once the celebrated *Cythera*, the coasts present an uncheerful assemblage of confused rocky precipices, rising in sharp points; the interior is also generally mountainous and rocky, but the valleys afford corn enough for the consumption of the inhabitants, beside some wine, oil, and silk. The island abounds in hares, partridges, woodcocks, and, above all, turtle-doves, the birds of Venus, of whom this island is supposed by the poets to have been the favourite residence. Vast flocks of quails also traverse the island in autumn, on their passage to the coast of Africa. The population, according to the census, in 1827, amounted to 8,146, now protected by the British government, as a state of the Ionian Islands: previous to this change in their political condition the inhabitants had little external communication, the island being seldom visited, unless casually by ships waiting for a wind to go into or out of the Archipelago.

The chief town, or rather village, is *Kapsali*, on the south coast: it is situated on a high rock, and has an open cove for ships. *St. Nicolo*, on the S.E. side, has also a port, with a mole for small craft.

As Cerigo, as well as the land to the northward, is high, it appears to those who are coming from the westward, at the distance of 5 or 6 leagues, as if the whole were connected together; but, on a nearer approach, they discover the passage, which is fair and clean.

There is no anchorage on the north nor on the west side of the island that can be recommended; but there is excellent ground opposite Kapsali, in 20 fathoms, with the east point E.S.E., and the west point S.W.: here you may lie well sheltered from northerly and westerly winds, but South and S.E. winds blow directly in. At 2½ miles true South from this place is the islet called *Ovo*, or the Egg, which is merely a large conical rock, steep-to, and about 500 feet in height.

Cape Capello, the S.E. point of Cerigo, is nearly a league to the eastward of Kapsali; and, at 2½ miles S.E. by E. from that cape lies the inner of two large rocks, or islets, called the *Kouphenisi*, both of which are steep-to. *St. Nicolo* is nearly two leagues N.N.E. from Cape Capello; off this place ships may anchor, in from 20 to 30 fathoms, well sheltered from northerly and westerly winds.

Off the east end of Cerigo, two miles eastward from S. Nicolo, are two islets, named the *Dragonera*, under shelter of which occasional anchorage may be found: the best riding is under the northern one, in 20 or 22 fathoms, good ground. This is an excellent place for ships bound to the eastward, as they may sail in or out with any wind. The latitude is 36° 13′; the longitude 23° 8′.

CERIGOTTO, &c.—At 17 miles S.S.E. [*S.E. ¾ S.*] from Cape Capella, the S.E. extremity of Cerigo, is the north end of *Cerigotto*, [ant. *Ægilia*,] a narrow rocky island, rather more than four miles long, from north to south. It was formerly noted as having been inhabited by criminals who had here found an asylum, and lived in an independent state, with the assistance of a few boats, &c. The south end of Cerigotto is named *Cape Apolitara.*

At

At the distance of between two and three miles to the northward of Cerigotto are the several widely-detached rocks called *Porri*, *Perretti*, and *Nautilus*. They will all be avoided by keeping within the distance of half a league, or without the distance of four miles, from Cerigotto. The northernmost, and easternmost, *Porri*, is in latitude 35° 56′, longitude 23° 15′.

CURRENT.—Mr. Wood says that, in working for the Servi Passage, after rounding Cape Matapan, with light easterly winds, a current was found setting out of the Gulf of Kolokythia down to Cerigo, and it appeared that the vessels which kept the eastern shore of the Gulf on board had a decided advantage over those which stretched farther to the southward; and he imagines that, after getting to the eastward of the west point of Servi, the current sets more to the westward; but, in passing close to Cape Malea, with a light air, and sweeping, they found the current setting strong to the northward. It is, however, unquestionable, that the currents here must vary with the wind.

If you make Cape Malea with the wind northing of west, rest assured that you will find a North or N.E. wind in the Archipelago; keep, therefore, a sharp look-out for squalls.

WINDS IN THE GRECIAN SEAS AND ARCHIPELAGO, WITH GENERAL REMARKS ON THE PASSAGES TOWARD SMYRNA, &c.

In attempting a passage during summer between Cerigo and the Archipelago, to the north-eastward, ships are frequently opposed by the winds denominated the *Etesiæ* or the *Etesian winds*, which blow from the N.E. and the N.W. These winds may be regarded as the monsoons of the Levant; they blow almost constantly during the summer months, and attemper the air. It is to these winds that Greece owes the many advantages of her climate. Throughout the whole of the Mediterranean, but mostly in the eastern half, including the Adriatic and Archipelago, the N.W. winds prevail in the summer months. During winter the winds are variable, but the S.E. and S.W. blow frequently with great force near the solstices, or longest and shortest days.

In Greece, particularly in the Morea, which is almost surrounded by the sea, the Etesian winds, according to the antient writers, blow about forty days; and the *prodromi* (or forerunning winds) precede them about eight or ten days; making in the whole, about fifty days: the summer Etesiæ, in Greece and the Morea, come from the N.W. Cicero says that the Etesiæ are, in Italy, equally comfortable and salutary to all animated beings, and likewise beneficial to vegetation, by moderating the violent heat of the weather during the inclement season of the dog-days.

When the sun, on advancing toward the north, has begun to rarefy the atmosphere of southern Europe, the Etesiæ of spring commence in the Mediterranean Sea; these, according to the antients, blow in Italy during the months of March and April, and were called by the Romans the *Favonii*. Their influence is, at first, but slightly felt; but so soon as the earth becomes considerably warmer than the sea, the current of air will move from the sea toward the land, and consequently produce the Favonii, or gentle western breezes.

In the autumn the winds become variable, sometimes blowing from the sea toward the coast, and, at other times, in a contrary direction. These frequent changes are attributed to the sudden alteration in the temperature of the sea and land; for, as the sun regularly declines toward the equinoctial, the earth, both on the continent of Europe to the northward, and of Africa to the southward, gradually cools again, subject for some time to slight variations, either on the earth or the sea, which must necessarily produce variable winds in the Mediterranean, until some weeks after the autumnal equinox.

Mr. Laurent, in his Recollections of a Tour, &c., illustrates this subject, and says that, Having passed Cerigo, when bound to the N.E., a violent North wind drove the vessel toward Candia. Here she was buffeted about a long time, but at last made and passed the islands of Milo, Thermia, and Ghioura. Frequent calms foreboded the commencement of the *Etesian gales*, which were not long in making their approach; the black appearance of the sea in the horizon, and the ships descending the Archipelago, before the wind, proved the necessity of preparing for the approaching gale. All on board was again brisk and lively; the wind furious and contrary, but the port of Zea was reached, and shelter taken therein.

The SCIROCCO or SCIROC, which at times prevails, in a different season of the year, has been

been noticed as follows, by Mr. Galt, in his lively volume, entitled '*Letters from the Levant.*' He sailed from Malta in a Greek polacca, belonging to the Isle of Petza or Spetzia, (Gulf of Nauplia,) 18th Jan. 1810, for the purpose of proceeding to that place; but, on the next forenoon, he says that a Levantine sciroc arose, and continued to increase for twenty-four hours, while, however, the vessel worked onward. On the morning of the 21st it blew a perfect hurricane; and the polacca bore away, before the wind, for a port in the Adriatic. At noon the sky appeared to be involved in a thick tumultuous smoke; and the vessel was suspended, as it were, on the curl of a vast wave; and although there was as little of the foresail spread as possible, she drove at a prodigious rate. When in sight of Corfu the wind shifted to another quarter, and shelter was, at length, found in the harbour of Valona, 12 leagues more to the northward than that island.*

General Description *and* Remarks *on the* Archipelago, *by* Captain John Stewart, R.N. 1810.†

"There are very few hidden dangers in the Archipelago; and, unless when they are mentioned, it may be considered that all the shores of the coasts and ports in the following remarks are bold-to.

"The most prevailing winds are the N.E., or Etesian winds, which blow fresh, and almost constantly, for several months in the autumn: they are called by the Turks the *mel-tem*, and render the islands extremely healthy. They are succeeded by variable weather and winds: then comes the rainy season: most of the rain falls with easterly and southerly winds: this is followed by violent northerly and N.N.E. winds, with sleet and snow, which are the worst winds I met with, particularly toward the Dardanelles.

"The winds from S.W. to S.S.E., and those from North to N.N.E. and N.E., are the most violent. The southerly winds generally come on gently, and get stronger, with worse weather, till, after heavy rain, they fly to W.N.W. and N.W.: but the wind stays a very short time there; for, after wavering about, it comes with extraordinary violence from the northward or N.N.E., and probably lasts two or three days, and sometimes longer, when it dies away.

"The N.W. winds now and then come in violent squalls, but they are neither so common nor so lasting as the North and N.E. winds. Of the S.W. the same may be said, only the former come on suddenly, the latter gently. With westerly winds generally is fine weather.

"You will seldom have good weather after October. I found the months of February and March very bad. Generally about the beginning of April the winter breaks up, and you have fine weather for the summer.

"These are the general rules, as I was informed, and afterward experienced. From this it may be observed, that it is always safe to anchor under the lee of an island with a northerly wind, as it dies away gradually; but it would be extremely dangerous with southerly winds, as they almost invariably shift suddenly to a violent northerly wind; though I have seen the wind, during three or four successive days, go from the southward to W.S.W. for some hours, and then back round and blow again.

"*The Current in the Archipelago* sets almost continually to the southward, and is increased or retarded according to the winds. In lying at Tenedos, near the mouth of the Dardanelles, I have observed a long south wind entirely stop it; but it came strong to the southward the moment the gale from that point ceased. One exception to this rule is, that inside of Thasso, and past Samothraki, the current sets to the eastward.

"*To enter the Archipelago from the westward* there are three ways, viz. between Cerigo and the main, between the former and Cerigotto, and between Candia and the latter of these islands. Toward the end of summer, and in the autumn, you ought always to make Cape Matapan, and, if possible, pass between Cerigo and the main: the passage is clear,

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* The calm which presages an approaching storm, is, at times, so dead, that the face of the water is as clear as a looking-glass. On the coasts about Smyrna, a long calm is generally considered as the forerunner of an earthquake.—*Falconer. Marine Dict.* art. *Calm.*

† Observe that, in this description, the bearings are the *true*, and not by compass.

and

and about five miles wide; (there is a small rock above water off the north end of Cerigo). By doing this, you have the advantage of being so much to windward, as the northerly and N.E. winds almost continually blow at that season.

"*If you make Candia,* or if you are to beat through with a hard easterly wind, the channel between that island and Cerigotto is much the best; because, if it be tolerably clear weather, as the channel is perfectly free from danger, you may beat in the night. It is five leagues across from the south end of Cerigotto to the island of Sordi, and half a league more to Grabusa: all these are steep-to; I have worked through night and day. There is not the least danger in the middle channel, between Cerigo and Cerigotto, provided you have day-light to be sure of beating through with: but it is not so eligible in the night, on account of the following rocks and islands, which are steep-to, but some of them not high, consequently not easily seen in the night; viz., off the south end of Cerigo, apparently about two miles, lies the island of *Ovo;* this is a high steep rock: off the S.E. end of Cerigo lie two low rocks, called the *Kouffes;* they may be off shore two and a half miles, and half a mile from each other. The passage between Ovo and Cerigo, between Cerigo and the Kouffes, and that between the latter and Ovo, are all perfectly clear. Off the north end of Cerigotto, pretty close-to, is a small rock above water. The island Porri, off the north end of Cerigotto, is pretty high, and can be seen at some distance. The other Porri, [*Porretti,*] a low, bluff, rugged rock, about two miles and a half to the S.W. by W. (true) of the larger one: this I should think very dangerous, as it is the outermost, and can never be seen far in the night. The rock on which the Nautilus was lost bears about N.W. by W. ½ W. (true) from the north end of Cerigotto, and about S. by E. ½ E. one and a half mile from the smaller Porri [Porretti]; it is very little above the water's edge.

"*Having entered the Archipelago by the northern passage,* if you have a leading wind, steer for the island of *St. George,* which lies off the Gulf of Egina; if you have variable winds, keep, in summer and autumn, well toward the main, as you may expect northerly winds. I would work through the passage between Zea and Macronosi, or Long Island; but with a free wind, sail between Zea and Thermia, and then pass between Andros and Cape Doro: all these channels are perfectly clear: this will take you into a clear sea, except the Coloyera,* which is a very dangerous rock, about the size of a ship, bearing S. 25° W. (true), seven leagues from *Anti-Ipsera.* I am told that, off the north end of it there are breakers extending nearly two miles, but I have not been close enough to ascertain.

In going to Smyrna in summer, the above course is best; but the merchantmen, on account of the prevalence of South and S.S.E. winds, in *winter,* when bound to that port, often pass between Serpho and Siphanto, then between Syra and Delos, and so on between Tino and Myconi; this is, that they may get hold of the south end of Scio, and run for Smyrna, passing inside of that island. But in making this passage in thick weather, I should advise not running in the night; as, after going between Serpho and Siphanto, (half a mile off the north end of the latter is a low rock,) you have space for the night clear of islands or rocks: but about due West (true) ten miles from the north end of Paros, lies a rock, about the size and having the appearance of a ship, in latitude 37° 10′ North, called *Boui;* also, nearly in mid-channel between Syra and Delos, a low flat island, called *Nata,* or *La Natte.*

"*After passing the Doro Channel,* and weathering the Coloyera, [*Kaloyeri,*] you have a clear channel up to Tenedos, and outside of that to the Dardanelles. But, in beating up, you must take care to avoid the following dangers: viz.—three small islands off the north end of Skyro, and the pilots say it is shoal above a mile outside of them; so that as there is no passage between them and that island, you must give it a berth of at least six miles to clear all: on the east, south, and west sides, Skyro is steep-to: some small islands lie off the west end of the largest, Skyro Poulo; I have worked between them. The pilots tell me there is a small rock under water off both the north and south end of Agio Strati, [S.S.W. of Lemnos,] but both very close. A shoal runs a long way off the east side of Lemnos; they say ten or twelve miles, some even fifteen miles: a Russian line-of-battle ship was lost upon it. This shoal you must guard against in working up for the Dardanelles between Tenedos and Lemnos, as in light winds a current sets strong toward it: Tenedos, on the N.W. side, must have a berth of three or three and a half miles.

"*To work up to the Dardanelles,* I prefer going inside of Tenedos and the Rabbit

* Properly the *Kaloyeri* or *Monks,* in lat. 38° 10′, as shown hereafter.—*Edit.*

islands:

Islands: you can go by your lead, and, during light winds, you may anchor any where. If you go outside of Tenedos, and it falls calm, the current sets you toward the shoal off Lemnos.

"Till you come to the village over Cape Janissary you may stand pretty close to the shore; but off that village it runs shoal a long way: you must, therefore, cross the current before you get so high, and stretch over toward Imbro, or the Gulf of Saros, whence you will fetch under the European Castle. It is dangerous, however, to haul too close round the point on which this castle stands, as a shoal runs off about three-quarters of a mile in the S.W. direction: it may be avoided by keeping the lead going, and not approaching within 10 fathoms. This remark relative to the shoal water off the European Castle I had from the Honourable Captain Waldegrave, not having been close to it myself."

The preceding Explanation and Instructions, by Captain Stewart, *have been corroborated and amplified by* Mr. Wood, Master, R.N., *during his six years of experience on this station; and we, therefore, add the following*

REMARKS ON THE WINDS AND PASSAGES, FROM MR. WOOD'S JOURNAL.

"*The most prevalent winds in the Archipelago* are from between North and East. The north winds commence early in the month of June, and blow almost constantly until the month of September. About the latter end of this month the winds become variable, with dark cloudy weather, succeeded by heavy rain, thunder, and lightning. The most of the rain falls during E.S.E. and S.S.E. winds, and no favorable weather may be expected after the month of October. A great quantity of sleet, snow, and rain, falls in December; but the worst weather I have experienced during a six years' station was in the months of January, February, and March. Toward the end of March the weather begins to break up. October and November are the months in which southerly winds are most prevalent. These come on gently, but acquire strength with worse weather: here it blows strong for two or three days, when it shifts, with hard rain, to the S.W., and becomes fine. It sometimes backs to the S.E. and blows again, when it shifts, with hard rain and squalls, to the N.W.; here it remains but a short time, when it veers to the N.E., and blows exceedingly hard. The S.E. and S.W. winds come on in heavy squalls, but they are not common, nor are they lasting. Westerly winds are generally fresh, with clear, pleasant weather.

"*The Currents in the Archipelago* may be considered as almost always setting to the southward; the velocity increased or retarded according to the strength and direction of the wind. When we lay at Tenedos, in 1820, I found it running at the rate of two miles an hour; after strong winds, blowing for two or three days from the southward, it stopped; but immediately the wind ceased from that quarter, it came strong from the old point again. Here we lay for three weeks, and I frequently tried the current.

"*In order to enter the Archipelago*, ships should endeavour to pass between the islands Cerigo and Servi, which passage is, at all times, to be preferred; but more particularly in summer and autumn, because the prevailing winds are then between the north and east; and by passing through this channel you will gain twenty miles to windward of the other channels; and at night, in all probability, will get the wind more northerly from the Gulf of Nauplia, and check the current commonly found to be setting to the southward; in addition to which you will have the advantage of smooth water. The passage is about four miles wide, and Mr. Wood says that it appears to be free from dangers, having worked through it very often.

"*By taking the passage to the northward of Cerigo* you avoid the danger arising from being too near the high rocks *Ovo* and *Kouphes*, lying to the southward of that island. The latter are directly in the track of vessels going up the Archipelago, and bear E. by S. from the former, 5 miles distant. These rocks are about 40 feet above the level of the sea. You also avoid being set down on the islets *Porri* and *Porretti*, or *High* and *Low Porri*, between which are the rocks on which H. M. sloop the *Nautilus* was wrecked.

"*Having entered the Archipelago* by the weather passage, with the wind from the northward, and being close-hauled, I would recommend keeping on the larboard tack as long as possible, because the wind generally comes more easterly as noon approaches: then tack and stand right across toward the island Hydra, where you will gain the wind out of the Gulf of Egina. At night, then work between Macronisi and Zea, which channel is six miles broad and free from danger; excepting that, off the S.W. point of Zea, there lies a rock with only 6 feet of water on it. *If you have a leading wind*, steer for the passage between

between the rock *Karavi* and the islet *Kaiméné* or Bella Poulo ; then for that between Zea and Thermia, leaving St. George or the Cardinal's Cap to the northward : next steer N.E. by N. and run between Negro-pont and Andros, through the channel commonly called the *Doro Passage.**

" *With a southerly wind* pass between Serpho and Siphanto, recollecting that off the north point of Serpho is a low rock about a mile from shore. You now pass between Syra and Nata and through the Tino and Myconi Passage; next steer N.E. by E. for Venitici [Venecia?] the rock off the south end of Scio, and run through the Strait of Scio. This channel is to be preferred by vessels bound to Smyrna, because they will thus save rounding the island Scio, and also have the advantage of being thirty miles to windward ; and, should it come on to blow strong from the Gulf of Smyrna, as it often does, they will be able to get into the harbour of Foukia or Fouges on the north side of the entrance.

Concluding Remarks.—*The importance of a correct knowledge of the navigation of the Archipelago*, and of the indications of a change of weather in these seas, was most strikingly exemplified by the loss of a fine ship of the line, *Le Superbe*, near the west side of Paros, in the month of December, 1833. It appears from an imperfect dispatch of the French Admiral *Baron Hugon*, dated Roads of Nauplia, December 27, that the Superbe was wrecked on the 15th of that month, at the entrance of the port of *Parekia*. This ship, in company with the *Galathée* frigate, was on her way from Smyrna to Nauplia. They left the Gulf of Smyrna, with a fine easterly breeze, and were misled by the expectation of a quick passage; but, in a few hours, 'the weather became tremendous,' and during the night of December the 14th, there came on one of the most violent hurricanes ever known hereabout. After having lost her maintopmast, all her sails torn from the yards, and her boats washed overboard, the Galathée miraculously gained the Doro Passage at mid-day on the 15th, though unable to distinguish the land, from which she was distant only a few cables' length, and entered the Bay of Carvi† [Karysto in Negropont?] where she lay till the storm had ceased. On the 22nd she arrived and cast anchor at Nauplia.

The *Superbe*, likewise, lost her maintopmast and a part of her sails; she was driven farther southward, and into the channel between Tino and Myconi, and made for the port of Naussa, on the north side of Paros. The darkness, however, prevented her from distinguishing the entrance, and, having passed to the westward, she was compelled to suffer herself to be carried on, in the hope of gaining the small port of Parekia, on the west side of the island. At two o'clock of the afternoon of the 15th the ship was no more. She had struck on a reef of sunken rocks, and gone to pieces. The fall of her masts, and the difficulties in forming at first a communication with the shore, unhappily cost the lives of nine men. The rest were saved.

The American ship *United States*, Commodore Patterson, (according to the despatch) left the Gulf of Smyrna a few hours before the Superbe. She lost some of her masts, her sails were torn away, and her boats carried off; and, being nearly embayed off the coast of Andros, and expecting every moment to be the last, a sudden gleam of light enabled her to discover the narrow passage between Tino and Andros ; she was enabled to get through it, and gain the harbour of Milo.‡

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* " *March* 12, 1828.—At 9 *p. m.* cleared the Doro Passage, and shaped a course N.E. by E. for Ipsera; ran 45 miles by log, and made the western part of the island, which bore E.N.E. distant seven or eight miles. Hence I conclude that a N.E. by E. course is rather too much to the eastward, and I recommend a N.E. course from the Doro. This course will lead to the westward of the island."—*W. W.*

† According to the Admiral's despatch *Carvi.*

‡ *Query.*—Were either of these ships, on their departure from Smyrna, furnished with the Marine Barometer or Simpiesometer, either of which would have indicated the approaching gales? See the *Appendix* to our *Memoir on the Atlantic Ocean.*

XI.—The ISLAND and SEA of CANDIA.

GEODETIC POSITIONS.	Latitude.				Longitude E.		
Isle Sordy or Petalida; centre	35°	34′	20″	..	23°	27′	12″
Cape Buso	35	36	38	..	23	35	39
Isle Grabusa	35	35	30	..	23	33	20
Cape Spada; monastery	35	40	30	..	23	43	10
Canea; the town	35	28	45	..	24	12	50
Cape Maleka	35	35	0	..	24	8	0
Cape Retymo?	35	27	0	..	24	41	0
Candia; the city?	35	20	45	..	25	8	0
Cape S. Giovanni or St. John?	35	19	0	..	25	47	0
Cape Sidero	35	19	0	..	26	17	40
Cape Salomon	35	9	15	..	26	19	10
Cape Xacro	35	2	0	..	26	15	15
Christiana Isles; middle	34	55	0	..	26	7	40
Calderoni or Gaidronisi; N. W. point	34	52	35	..	25	43	0
Cape Theodia or Matala	34	55	5	..	24	45	5
Paximades or Kabra Isles	34	59	40	..	24	34	50
Isle Gozzo; western point	34	52	0	..	24	2	0
Anti Gozzo	34	56	15	..	23	59	25
Cape Crio	35	15	40	..	23	30	30

CANDIA, the antient Creta, and now by its inhabitants called Kirit * or Criti, is nearly forty-six leagues in length from West to East, and at its widest part, which is near the middle, it is ten leagues in breadth. The N.W. end is 19 miles to the S.E. from the isle Cerigotto. Candia is generally mountainous, but extremely fruitful. It has no stream that deserves the name of a river, but is abundantly watered by rivulets, descending from the mountains to the sea. The climate is, in general, temperate and healthy. In December and January heavy rains fall in the plains, but there is seldom snow or frost. In the summer the heats are tempered by diurnal sea-breezes, here called *imbat*, which blow from eight or nine o'clock in the morning till the same hours in the evening, and the directions of which vary on the different coasts; being from the North on the North coast, and from the S.W. on the South. The *land* winds on the Northern coast, and particularly toward its eastern part, are deleterious, and sometimes even suffocate persons exposed to their first force.

The vegetable productions of Candia are excellent. Its mountains are covered with forests, and abound with aromatic plants. The rivulets are bordered with myrtles and rose-laurels, and the valleys covered with orange, lemon, almond, olive, and other fruit-trees. The island also affords cotton and silk for export. The wild animals are deer, hares, and goats. There is neither beast of prey nor venomous reptile, except a few snakes, and it is not even certain that they are venomous. Mount Ida, now called *Psilority*, of which the summit is usually covered with snow in winter, is nearly in the centre of the island. The present population of Candia is supposed to be about 250,000, of whom two-thirds are Turks.

Oil is the great article of export, but besides this are soap, honey, wax, cheese, raisins, almonds, walnuts, and chestnuts, caroubes, † flax-seed, liquorice-root, and whetstones. The port of the city of Candia, on the North coast, is alone permitted to export these products, in order to prevent their being smuggled out of the island without payment of duty. This restriction greatly increases the price, from the expense of transporting them by land from all parts of the island. Much of the oil and wax is taken off by the French of Marseille; soap and cheese are sent to Constantinople and the ports of Asia-Minor; honey to Con-

* Or *Kirit Adassi*; that is, *Kirit Island*.

† Carobas or locusts, the fruit of the locust tree.

stantinople

stantinople and Egypt; the raisins, which are of a very inferior quality, to Syria and Egypt; whither, also, are chiefly sent the other fruits; the flax seed goes mostly to Italy.

The North coast of Candia is indented by considerable bays, which will presently be described. Upon this coast it has been observed that, with the wind blowing strong from the West, for any continuance, the waters rise two feet above their common level; and with the wind from the North or East they fall two feet below that level.

CAPE BUSO, the N.W. extremity of Candia, is an elevated and bluff point. Three small islands, *Grabusa-Agria*, *Grabusa*, and *Sordi* or *Pétalida*, lie to the northward and westward of the Cape. The first two form a harbour which is fit for the largest vessels, and is protected by a fort on Grabusa, the largest of these isles. *Sordi*, the smallest, bears W. by S. two leagues from Cape Buso.

GRABUSA.—The anchorage of Grabusa is described by Mr. Wood as follows: This anchorage is situate in latitude 35° 34′ 48″. Variation 15° 6′ W. It is moderately sheltered, but of holding ground there is *none*. You may as well let go the anchor on a stone pavement as in Grabusa, speaking of it comparatively. Chance may cause your anchor to hook a rock, if you are driving; but, says Mr. Wood, for my own part, I think, for the safety of your ship, all your ground tackle in mooring is not too much, and with an open hawse to the westward.

There are two safe entrances to the anchorage; but, for a stranger, the northern passage, between Grabusa and Grabusa-Agria, is to be preferred. In advancing through the latter, steer for the Candian shore, which is very bold; and, as you haul round to the southward and westward for the anchorage, give the eastern point of Grabusa Island a good berth, as a dangerous reef projects from it: do not approach it nearer than in 10 fathoms, keeping the Candian shore on board until you open the little village on the island; you may then haul up more to the westward for the anchorage, rounding the reef above-mentioned, part of which is visible.

The Southern is a narrow passage, between a remarkable high black rock close to the Candian shore, and a reef extending from the Southern extremity of Grabusa. On the southern part of this reef H.M. ship *Cambrian* was lost.*

Upon entering this passage, steer for the rock above-mentioned, leaving it on the starboard side, and giving it a berth of a quarter of a cable. When you open the village you will then be within the reef, and may stand in until you shut in the eastern passage, where you may take up your berth as convenient.

The water here is brackish, and supplies very scarce; but, in point of strength, this place is a little Gibraltar.

H.M. ship *Raleigh*, after mooring with 70 fathoms of chain each way, drove in a moderate gale; remoored with 130 fathoms of chain each way, and backed the bower anchor with the stream chain and kedge to the shore, with the following bearings when moored:—Extremes of Grabusa from N. 55° W. to N. 51° E.; flagstaff at the fort N. 37½° W.; northern extremity of Sordi Isle N. 83° W.; eastern spar of the Cambrian's wreck S.W.

From Grabusa-Agria, the extremity of the promontory named *Cape Spada*, [ant. *Cimarus*] bears East [*E.N.E.* ¾ *E.*] at the distance of 8 miles. The irregular land between forms the deep Bay of *Kisamos* or *Kizamo*, which takes its name from a village at the head of it, having an old castle in ruins. There is another village, *Aspro-lomania*, or *Messonia*, at two miles more to the West. In the Bay there is no good anchorage. As the land of Cape Spada is high, bluff, and steep-to, it may be seen from a considerable distance.

When seen from the eastward, Cape Spada shows its outer part like a tongue bluff; a little way in is a small peak, and inside of that the land of the cape is like a quoin; so that it is easily distinguished.

BAY of CANEA.—The high steep point, named *Cape Maleka*, bears S.E. by E. ¼ E. [*E.S.E.* ½ *E.*] 20 miles from Cape Spada, and lies in latitude 35° 35′, long. 24° 8′. In the S.E. corner of the Bay, between these capes, is the town of CANEA, a well-built place,

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* H.M. frigate *Cambrian* was wrecked in the evening of the 31st of January, 1828, as she was coming out from the anchorage. The crew had no time to save much, as the ship instantly bilged, and shortly fell into deep water. The boats of the Isis, Rattlesnake, Zebra, and Cameleon, took them from the wreck.

containing

containing about 7,000 inhabitants. Its streets are regular and furnished with fountains. The fortifications are a rampart and deep dry ditch, with some batteries.

The damage caused by the stormy weather of December, 1833, to the Port of Canea has been thoroughly remedied by order of the Pasha, Mehemet Ali. It has now a fine mole, 1200 feet long, and capable of admitting a great number of vessels, and of larger burthen than is generally supposed; having accommodation for vessels of from 200 to 300 tons, in 4½ to 5 fathoms of water, good ground. For such vessels it has, therefore, become an important harbour. Without the pier N.N.E. and N.E. winds blow home, and occasion a heavy swell.

A tower on the mole-head, established in 1839, exhibits a light at 85 feet above the sea, which may be seen when twelve miles off. (See the plan of the port on the new Chart of the Mediterranean Sea.) Of the ports of Candia that of Canea is the most frequented.

The scenery around the Bay of Canea is very beautiful. In a S.E. direction is a row of mountains, and at the foot of these is the town. Large ships lie outside the harbour and are much exposed to northerly winds, when the swell is very great.

From Cape Spada the course to Canea is S.W. 15 miles. The town will be seen from a considerable distance; steer for it, and, when within two miles, you will perceive the entrance of the harbour, having a round castle on the right-hand side and the mole-head on the left. Small vessels may bring up at the mouth of the port, and will swing in ½2; carry stern-fasts to the shore and buoy up the cable. The distance from Canea, by land, to the salines, at the bottom of the Gulf of Suda, is three-quarters of an hour, (reckoning by time,) on a good level road.

At Canea wood may be purchased, and about three tuns of water, per day, may be obtained from a fountain, with a little wine and abundance of provisions. The exports are oil, cotton, and soap. The inhabitants have been described, generally, as a ferocious people. The principal commerce, however, is in oil, and the great quantity produced in the vicinity is the best for soap. Merchant vessels generally load at Canea, but ships of war anchor at Suda.

"*June* 23d, 1823.—Anchored off the town of Canea in 7 fathoms. Lighthouse on the Mole S.S.W. one mile; Cape Spada N.W. ½ N. This anchorage is open from N.W. to N.E., and must be very unsafe in winter. The regular anchorage is under the island of St. Theodore, in 4½ fathoms, soft mud, with the East end of the island S.E., two cables' length.

"The soundings are regular from 25 fathoms, two miles off, to 12 fathoms, within a quarter of a mile to the eastward of the town. The fort mounts to seaward 60 pieces of cannon, of which eight are 68 pounders."

About five miles to the W.N.W. of Canea is the little rocky isle of St. Theodore, on which formerly were two forts, now totally demolished. On the S.E. of this islet is a good road, which must be entered from the eastward, as there is a ledge of rocks on the other side, reaching from the main to the island. The anchoring ground is close under the island, and you may lie with your side close to the shore, on clear ground, with the East point of the island N.E. by E. and Cape Maleka E. by N.

Mr. Wood says, that the *Isle of S. Theodore*, in the Bay of Canea, bears N.W. about six miles from the town of Canea, and lies at about a mile and a half from the shore. Within it is anchorage in 9 fathoms, fine sand, the point bearing N.N.E., at three cables' length from shore. To sail in, leave the island on your starboard hand. With the point bearing North, and Canea town E.S.E., the ground is very coarse and injurious to cables. Along the isle, to the westward, the depth gradually diminishes to 2½ fathoms. The anchorage is exposed from N.N.E. to East, and is not to be recommended; nor can more than three sail of men-of-war anchor there at any one time.

Abreast of the town of Canea there is also an anchorage in 20 to 17 fathoms, at one mile and a half from the shore.

Cape Maleka or Melek is a long high and rugged piece of land, with a sugar-loaf hill on its eastern end. Rounding this you advance to the cape, bay, and anchorage, of Suda. Cape Maleka is very remarkable, as no other part of the coast on the north side of Candia is like it. Westward of the cape is shallow water, at half a mile off shore.

The land to the South-eastward of Cape Maleka, to those advancing from the eastward, appears

appears like an island, owing to the Gulf of Suda running in to the southward of it. There is no other land like it in Candia; it is quite steep-to, and no soundings with a hand-lead on passing it.

SUDA BAY.—To the south-eastward of the promontory, which is terminated by Cape Maleka, is the Gulf of Suda, the entrance of which is bounded by *Cape Drapano*, or *Mussa*, [ant. *Drepanum.*] The gulf extends two leagues and a half inland; near its North shore are two islets, on the western of which are a castle and several batteries, cut in the solid rock in tiers, and which command the entrance of the gulf, but are themselves commanded by the main land, which is only a quarter of a mile distant. On the islet is, also, a small village: The largest vessels may anchor near it, on clean ground, in 12 or 14 fathoms; but, at a little farther off, there are 30 and 40 fathoms, with some patches of rock. Above the islet the gulf is a mile broad, and the depth in the middle 25 fathoms, which diminishes to 15 and 10 fathoms near the shore. The harbour has been recommended as one of the best anchorages in Candia for refitting and obtaining supplies.

The passage into the harbour is on the south side of the islets. Ships, after passing, can run out of gun-shot above them; and there is good anchorage for any number of ships, in from 14 to 17 fathoms.*

We have a manuscript draught of the Harbour of Suda, dated 1760, upon which are the following Remarks. "*Cape Meleka*, [Cape Suda?] which makes the west entrance of the harbour, is a high rugged land, which may be seen 14 leagues off; but, with respect to the other land within it, which may be seen at 30 leagues, it appears but low, as you come from the sea. *Cape Kalapado*, [Drapano?] which is the eastern point of the entrance, is a high round hill, which may be seen at about 14 leagues.

The soundings all over the harbour are fine soft mud and clay; in the middle the water is very deep; in one part of it more than 100 fathoms; but at the upper part is very good anchoring in 14 or 15 fathoms. The best anchorage is, when you have a remarkable peak of land bearing E.N.E.; the south end of the isle, on which the town and fort are situate, E.S.E.; and, a watch-tower, at the head of the harbour, W.N.W. Here you will have 14 fathoms, and be a mile from shore. Ships may also anchor close under the town, but must lie very near, and moor one cable on shore, for here are from 30 to 50 fathoms of water, but good ground.

In a cove without, to the N.E. of the fort, there is good anchorage and shelter, in 10 and 11 fathoms. The town is strongly fortified all round, particularly at the south end, where there are three tiers of guns. It is said that there are eighty guns upon the island. The best watering place is near the middle of the harbour, upon the south shore.

RETYMO is 11 miles S.E. from the Cape Drapano. It is said to have from 5000 to 6000 inhabitants, and a small port nearly choked up. The town is well built, and defended by a citadel, on a rock, projecting into the sea, but commanded by a hill behind it. The coast immediately eastward of Retymo forms a bay, which terminates with *Cape Retymo*, at 11 miles to the eastward. The coast thence trends, in high cliffs, to *Cape Sassosa*, or *Sassa*, which is at the distance of nearly five leagues. A broken and irregular coast succeeds, for about four miles, to *Point Fraschia*, the west end of the Bay of Candia.

BAY of CANDIA.—The line of coast comprehending the Bay of Candia is comprehended between Point Fraschia and *Cape St. John*, a distance of 12 leagues. The city of CANDIA, the capital of the island, is five miles S.E. by S. from Cape Sasso, and is reported to contain from 12,000 to 13,000 inhabitants, of whom about 10,000 are Turks. It is defended by a wall, a wet ditch, and some outworks. The port is formed by a strong pier, built on a ledge of rocks, but from negligence has long been filling up, and can now admit a few small vessels only. To the N.E. of the town, at the distance of five miles, is the island *Dia* or *Standia*, which is four miles long, from east to west, and

* "In Suda Bay, anchored off the watering place of *Kamara*, with the fountain W. by S. about a cable and a half, and the fortress of Suda N.E. by N., in 80 fathoms of water, on the edge of a bank which, in two cables' length, shoalens from 38 to 4 fathoms. From the eastern point one-quarter of a mile S.E. of the watering place, a shoal of 3 feet extends a cable's length. The fresh water is very excellent, running into the sea. On sailing round the Isle of Suda, we had never less than 10 fathoms within point-blank range, excepting off the N.W. point. There is good anchorage in the bottom of the bay, in 10 and 12 fathoms, mud."

two

two broad, very high, rocky, barren, and uninhabited: on its south side are three small harbours, of which the western one is the worst; and the middle one, *Port de la Madonna*, is the best. Here ships, which cannot enter the Port of Candia, discharge their cargoes into boats. You may lie with a fast on shore. On the east side of this island is also a road sheltered from N.W. by the West to South, but open to the eastward: at some distance, farther east, is the islet *Paximada*.

The summit of Mount Ida, [*Psilority*] bearing S.W. ½ W. [*S.W. ¾ S.*] will be in a line with Cape Sasso; the same summit S.W. by W. ½ W. [*S.W. ¼ W.*] will be in a line with Point Fraschia, and the same summit W. by S. [*S.W. by W. ¼ W.*] will lead directly into the port, southward of the island.

There is anchorage off the city of Candia in 22 fathoms, mud, with Cape Sasa bearing N.N.W., Isle of Standia N.E. by E., town of Candia S.E.; good holding-ground, but very open to the northward. The inner harbour, within the mole, has a depth of only 11 feet at the entrance, and 7 or 8 in the centre. Merchant-ships anchor in 7 fathoms, about half a mile east of the castle.

Cape St. John, or *St. Giovanni*, is nine leagues S.E. by E. [*E.S.E. ¼ E.*] from the N.E. end of the island Dia or Standia. It is sharp, and projects to the north-eastward. At 7 leagues N. by W. ¼ W. [*N.N.W. ¼ W.*] from this cape is the islet *Ovo* or Egg Isle, a large barren rock; and S.W. of the cape, at about 2½ miles, is the little harbour of *Spina-longa*, which affords good shelter for the coasters.

The BAY of MIRABELLA extends southward from Cape St. John to the distance of three leagues. On the western coast of this bay, which coast trends nearly S.S.W., and, at seven miles to the southward of Spina-longa, already noticed, was the village of *Mirabella*, now exhibiting a fort in ruins, and having a road sheltered by two islets. The town of *Settia* or *Sitia*, is on the coast at 7 leagues more to the eastward, and is surrounded by fortifications in ruins. Its Bay is sheltered, in some degree, by three islets, called the *Yanis* or *Janissaries*, of which we have no particular description, but which lie at nearly an equal distance from Settia and Cape Sidero, the N.E. end of Candia.

CAPE SIDERO may be known by a round hill, like a haycock, rather to the S.W. of it. This cape, from the southward, makes in hummocks, and has the appearance of several small islands, and is much lower than Cape Salomon, which is ten miles more to the south. At a league to the southward [*S. by E.*] from it is a small island; named *Elas*, or *Lassa*, to the S.W. of which is a bay, the Gulf of *Palæocastro*, in which there is good anchorage.

According to a Journal of the bark *Union*, in 1838, there appears to be a reef of rocks, between the Yanissary Isles and the western extremity of Cape Sidero, extending a quarter of a mile N.E. and S.W.; some of them above water. The original notice of them is singularly erroneous; but so near as we can conjecture they lie with the north end of the larger Yanissary, N.W. ½ W., 2½ miles, and the western extremity of Cape Sidero, S.E. by S. about one mile. The water much discoloured about a cable's length, in a N.E. direction.

Cape Salomon is the easternmost cape of Candia, and it lies about ten miles to the southward of Cape Sidero, in latitude 35° 9′, and longitude 26° 19′. From Cape Salomon, southward, the coast forms a bay, that of *Carouba*, beyond which is *Cape Xacro*, the S.E. extremity of Candia, in latitude 35° 2′, longitude 26° 15′.

The SOUTHERN COAST of CANDIA rounds to the westward, from Cape Xacro, nearly 4 leagues, to *Cape Gialo* or *Langada*. Off the coast between, at the distance of a league are three islets, the *Christiana* or *Kouphonisa Isles*; between these and the main ships may pass with safety, if necessary; but it is more adviseable to pass to the southward of them. From Cape Gialo, at the distance of 16 miles West [*W.S.W. ¼ W.*] are three others, the *Calderoni* or *Gaidronisi*, which lie at three leagues from the nearest shore, with the town of *Girapetra*, bearing N.E. ¼ N. [*N.N.E.*]

From Cape Gialo or Langada, 65 miles nearly true East, is *Cape Theodia* or *Matala*. The land between the two capes forms a curve to the northward, without any place of note. At three leagues N.W. by W. from Cape Theodia lie the three islets called the *Paximades* or Kabra Isles, 7 miles distant from the nearest points on the North and East.

The GOZES, or Isles called Gozzo and Anti-Gozzo, lie at the distance of between 10 and 12 leagues westward from Cape Theodia. The East point of the larger isle (*Gozzo* or *Gafda-nisa*) is in latitude 34° 50′, and longitude 24° 8′. This isle is 4½ miles long, from East

East to West, and two broad. *Anti-Gozzo*, or *Gafda-Poulo*, the smaller isle, is four miles distant from Gozzo, from which it bears true *N.W.* An extensive reef, with numerous rocks, extends from Gozzo to the N.W. which renders the passage between the two isles very dangerous; but there is always ample room between them and the main.*

Cape Crio, as before noticed, is the S.W. extremity of Candia, and bears from Anti-Gozzo N.W. ¼ N. [*N.W.* ¼ *W.*] 10 leagues.

XII.—The S.E. and EASTERN COASTS of GREECE, from Cape Malea or St. Angelo to Athens; thence from Cape Colonna to the Strait of Silota or Doro Passage, and including the Southern Islands of the Archipelago.

1.—The S.E. and Eastern Coasts from Cape Malea or St. Angelo to the Strait of Silota, with the neighbouring Islands.

GEODETIC POSITIONS.	Latitude N.				Longitude E.		
Cape Malea or S. Angelo	36°	26′	0″	..	23°	12′	0″
Monembasia or Malvasia	36	47	0	..	22	59	0
Islet Karavi	36	47	30	..	23	36	35
Kaiméné or Belo-Poulo; summit	36	57	15	..	23	26	25
Isle Falconera; summit	36	50	40	..	23	52	45
Hydra; N.E. end	37	23	0	..	23	35	0
Cape Skylleo or Skylli; summit	36	57	15	..	23	32	30
S. Giorgio d'Arbora	37	28	14	..	23	55	42
Gathronisi or Provençale Isle	37	39	6	..	23	57	2
Cape Colonna or Sunium	37	39	12	..	24	1	34
Macronisi; North end	37	45	13	..	29	9	31
South end	37	38	28	..	23	56	41
Port Mandri; summit of a sugar-loaf hill	37	44	15	..	24	3	47
Port Raphti; Statue Island	37	52	55	..	23	59	0
Island Zea; entrance of the port	37	40	0	..	24	19	0
Summit of the mount	37	37	18	..	24	21	40
Thermia; South point	37	17	0	..	22	22	30
Petalia; S.W. point	37	59	0	..	24	14	0
Cape Martelo, or S.W. point of Negropont	37	57	30	..	24	29	0
Karysto Isle; South point	37	55	30	..	24	32	0
Andros; N.W. extremity	37	57	0	..	24	42	0
Cape Doro, on Negropont; N.W. end	38	9	0	..	24	36	0
Kaloyeri or Monks	38	9	33	..	25	17	0

From Cape Malea, a high bold headland, the last point of the Morea heretofore noticed, (page 197,) the coast trends N. by W. [*N.N.W.* ¼ *W.*], 3 leagues, to the point distinguished by the chapel of St. Angelo, from off which, to the town of *Monembasia*, the principal town of this coast, the course and distance are N. by W. ¼ W. [*N.N.W.* ¼ *W.*], 16 miles.

MONEMBASIA is the town commonly called *Napoli di Malvasia*. The point of

* *From a Journal.*—"Observed an appearance of breakers for a long distance, (two or three miles,) extending from the south point of Gozzo. Latitude of the South point 34° 48′, long. 24° 10′. N.E. point, lat. 34° 55′, long. 24° 8′. Centre of Anti-Gozzo, 34° 57′, long. 23° 59′."

From the north part of Gozzo a shoal stretches out, apparently a mile and a half. The channel between Anti-Gozzo and Candia is apparently free from danger. The opposite coast of Candia is very high, rising perpendicularly from the sea. *Mount Ida* (now *Psilority*) has very deep ridges, and is generally covered with snow.

land

land near which it stands is almost an island, but connected by a narrow isthmus to the main. It is said to have only 2000 inhabitants, and is a place of little trade, having no harbour.

The town is divided into two parts; the upper town to the north, and the lower to the south. The first, being situated on a mountain, at some distance from the shore, appears from the offing to be insulated. The best anchorage is on the northern side of the peninsula, and on entering you will, therefore, have the upper town on the larboard side. To the N.W. you will hence see the ruins of *Palæo* or *Old Embasia*, on the high land. The roadstead has 16 fathoms, at some distance from shore. There is, also, anchorage to the south-westward of the town, but it is a place fit only to wait for a wind in. You may likewise stop in front of the cape in 20 fathoms, good ground.

On coming into the Southern Road, from which the Lower Town bears E. by N., at about two miles within the extreme point you will have 26 fathoms, to the southward of a high pile of rocks projecting from shore; and within the latter, off the Bridge and Guard-house, are 16 and 20 fathoms.

KARAVI, FALCONERA, and KAIME'NE'.—These islets, lying widely apart, may be occasionally seen by vessels bound to and from the Gulfs of Nauplia and Egina. The first, *Karavi*,

Karavi South, 3 leagues.

lies in or about latitude 36° 47′, at 29 miles N.E. by E. ¼ E. [*N.E.*] from Cape Malea or St. Angelo, at 9½ leagues E.S.E. ¾ E. [*East*] from Monembasia. Karavi is rather a rock than an island, for there is neither shrub nor grass upon it; it is steep-to, of a black colour, and about 100 fathoms in circumference, and appears at a distance like a sail.

Kaiméné or *Belo-poulo* lies nearly 12 miles N.N.W. ¼ W. [*N.W.* ¾ *N.*] from Karavi, 24 miles E.N.E. ¼ E. [*N.E. by E.*] from Monembasia, and 11 leagues N.E. by N. [*N. by E.* ¾ *E.*] from Cape Malea. It is two miles long, from S.E. to N.W., uninhabited, and it appears in two high round hills, like separate islands. This islet, as well as Karavi, is bold-to: you may pass on either side of either; yet it may be prudent to give them a berth.

The Isle Falconera bears East [*E.N.E.* ¾ *E.*] 12 miles from Karavi, S.E. by E. ¼ E. [*E.S.E.* ¼ *E.*] 20 miles from Kaiméné, N.W. by W. ¼ W. [*W.N.W.* ¼ *W.*] 16 miles from Anti-Milo, and S. ¾ E. [*S.S.E.*] 11 leagues from the East end of Hydra. At two cable's length from the N.W. point of this isle is a dangerous rock just above water. The isle is uninhabited, and may be seen, in clear weather, from the distance of eight or nine leagues.

From Monembasia the coast trends irregularly to the northward, 9 leagues, to the entrance of the GULF of NAUPLIA. Here the coasts of Greece again become interesting. The mouth of the Gulf is three leagues broad, and on its eastern side are the isles *Petza* or *Spetzia*, within which, on the main, are the ports of *Bisalti* and *Ververonda*, where, if requisite, you may come to an anchor.

HYDRA, THOKO or HYDRON, and SPETZIA or SPEZZIA.—*The town and port of Hydra* are on the north coast, at about half way from the east end of the island. The distance of this coast from the main land to the northward is, in general, 5 miles. The island *Thoko* or *Hydron*, with a similar isle, lies athwart this space to the N.W. of the port, so that the groupe forms a fine basin, open only to the East.

According to the description of Mr. Galt, the whole of Hydra is one great rock, naturally as sterile as a mass of recent lava. Not a tree grows on it; for the few shrubs among the houses are not entitled to that appellation. Nor does any flock feed on it, or the ploughshare ever impress its surface. But the inhabitants, without soil, without a single well in the whole city, containing upward of 20,000 inhabitants, without the natural possession of one article of convenience, even of necessity, have become opulent by turning their attention to commerce, and in these seas rival the fame and enterprise of the antient Phœnicians.

"Wholely occupied by their vessels and trade, they have, as yet, made no roads in the island. The town itself is exceedingly well built, and resembles the form of a theatre. The houses are piled, in successive tiers, to a stupendous height; but the crowded port below,

below, with the majestic stage of the sea, circumscribed by the distant scenery of Greece, displays a spectacle infinitely more sublime than any theatre can ever exhibit. There are forty parish churches in the town, and two of them have steeples built of marble. The buildings are handsome, constructed of stone, with solid walls; some of them are noble and towering above the rest. The upper class of Hydra are like the antient Genoese, who were frugal in their living, but splendid in their habitations.

The passage between the East end of Hydra and Cape Skylleo, or Skyllo, is about 4½ miles wide, and the two points bear from each other S. ½ E. and N. ¼ W. The beautiful town of Hydra is situated, as already described, rising up the side of the mountain. There are three small ports at Hydra, capable of containing about fifty sail. They lie moored head and stern to the rocks, as there are 45 fathoms of water within half a cable of the shore, and there is no anchorage near the island.

The principal port is defended on each side by batteries mounting thirty-six heavy brass guns. To the westward of the town are five islets, one of which has the remains of a water tank and an old lazaret on it. They lie at about a cable's length from the shore of Hydra. West, about one cable's length from the westernmost, is a reef just above water, with 30 fathoms close to it.

The land on the Morea side is very high, but its shore is very low, therefore great care should be taken when standing in for it by night. At about West, probably W. by N., from Cape Skylleo, and N. by W. ¾ W. from Hydra, is a *very low shingle point*, projecting some distance into the sea. There is a large white building, formerly a convent, and an olive grove near it. You may anchor on the S.E. side of it, in 16 fathoms, good ground, but this spot is exposed to S.E. winds, and therefore not safe in winter.

If beating up from Cape Skyllo by night, keep the Morea shore on board, as you may expect the land-wind, taking care *never* to stand into less than 20 fathoms, which depth will be found at half a mile *only* from the shore, until up to the above-mentioned anchorage.

GARDEN BAY, in Hydra.—Having rounded the Shingle point, in 15 fathoms, you will find, on the western side of it, a continued safe anchorage for nearly four miles, in from 18 to 20 fathoms, good holding ground; and, if beating up, stand no nearer than in 14 fathoms. This anchorage is generally known by the name of *Garden Bay*. Mr. Wood says:—The marks here, with which we usually anchored were, the town of Hydra S.E. ½ S., the S.E. end of Thoko on with an islet in the passage, S.S.W., and the Shingle point E. by S.* If going to the southward from this anchorage, you pass between the islands of Thoko and Hydra, then between Trikera and a small flat island with a sugar-loaf hill at its eastern end, keeping nearer to Trikera than to this, as it is not laid down on the common charts.†

The Island Hydra is very high, and a complete rock: it is, therefore, dependent for supplies on other places. The inhabitants amount to 30,000, of which 10,000 are good seamen and able-bodied men. Refreshments in small quantities may be procured at some villages near the anchorage, and lemons in abundance. The fresh beef, in general, is very poor. Fuel can be procured in moderate quantities, and at a reasonable price.

In the winter months, the north-easterly winds blow over the high land of the Morea in most tremendous squalls; so much so that I have rode with two cables an end and topmasts struck: and, with S.W. winds under Hydra the squalls are so sudden and violent that, in carrying sail, great caution is necessary. H. M. brig *Algerine* upset close to the islands in the night of January 9, 1826.

CASTRI.—The town, or rather village, of Castri, lies on the main N.W. by W. ten miles from the town of Hydra. On the south side of it is a most excellent anchorage in

* Marks for the anchorage, in 17 fathoms, stiff mud;—a white house on a hillock on shore, N.E. by E.; centre of the town of Hydra S.E. ½ S.; the S.W. part of Hydra and eastern end of Thoko shut in, S. by W.; low sandy point south-westward of Cape Skyllo E.S.E. ¼ E.; East end of Hydra S.E. by E. ¼ E.

† GARDEN BAY is thus described by another officer:—"This bay is about seven miles to the N.N.W. from the town of Hydra, and N.N.E. ½ E. from the Isle of Thoko. On approaching from the S.E. the only danger to be avoided is a shoal stretching about half a mile from the point about two miles to the eastward of Garden Bay, which may be readily known by the large white building, just within it, and the only one on this part of the coast."

In sailing to the westward, from Garden Bay, you may proceed either on the East or the West of Thoko. The Eastern passage is that generally used.

from 15 to 9 fathoms, muddy bottom. This roadstead is formed by two tongues of land, moderately high, and a large plain on the west, with a monastery and lemon garden on it.

On the northern tongue are the remains of an amphitheatre and the walls of *Hermione*: on the north of this is a small harbour, with 7 fathoms of water at its entrance and two fathoms within: it is fit only for merchant vessels, or the small vessels of war called *Pelters*. North-eastward of this harbour is a deep bay, with a small islet at the N.W. end of it, and anchorage in 18 to 16 fathoms, good holding ground.

To the south-westward of the Southern Tongue is another bay, but *not* good anchorage. There are two flat black rocks, just above water, bearing from the eastern end of the Thoko Passage North, about one mile and a half, and very dangerous by night. At N.E. by E. ½ E., 200 fathoms from these rocks, is a bank, consisting of sand and large stones, with only 19½ feet of water on its shoalest part. This is about one cable and a half in circumference, with 4 to 7 fathoms around it, and 30 fathoms close to its N.E. edge. There is a channel between, with 15 fathoms, but, as it is very narrow, it is better to sail to the northward of it. *The marks for the shoalest part* of the bank are, the *seven windmills* above the town of Castri, nearly in a line with each other, and with a remarkable hill, that has a small church with a key on it, behind the town N.W.; the two points of the Thoko Passage, just touching, S. ½ E.; Hydra town E.S.E. ½ E.; remarkable sugar-loaf mountain, N.W. by W. ½ W.; ruin of an old castle on a high hill, between the two mountains inland, N.E. ½ N. *The clearing marks* are, the two points of the Thoko Passage, bearing South, kept a boat's length open, which clears the shoal on the eastern side; and a square tower near a dwelling house in the lemon garden W. by N., just in sight over the declining land, looking like an island East of it, leads 100 fathoms clear of it on the north side. There is no other danger in the bay, and the soundings are regular.

The best mark to anchor with is, the windmills bearing N. by E., and the monastery W. ½ N. or West, in 10½ fathoms. Although the bay is exposed to a long fetch from the E.S.E., but little swell sets in.

ISLAND of THOKO or HYDRON.—This island lies W. by N. and E. by S. stretching across within half a mile of the Morean shore, and leaving clear passages at either end, called the *Hydra* and *Thoko Passages*. The passage between the S.E. end and Hydra is rather more than one mile broad, and free of danger. In the middle of the Thoko Passage there is 25 fathoms of water, and 15 close to the shores. On the south side of the island the land is very high and almost perpendicular; near the N.E. end is a deep bay, with good anchorage for a few ships, in 17 to 18 fathoms of water, and it is an excellent place to heave a ship down in. Near this is an olive grove, with a few straggling corn fields. A few years ago only three families existed on the island.

At 100 fathoms off the shore, and bearing N.E. by E. ½ E. from the north point of the island, and North from a remarkable hummock above the N.E. point, is a flat rock, half a cable in extent each way, with 9 feet on its shoalest part, and 3 to 7 fathoms around, with 20 fathoms at half a cable's length to the northward. This is the only danger near the island, and not laid down in any of the charts up to the 9th of March, 1827. The shoal is about a cable and a half in circumference, with 3½ fathoms over it. The marks, Thoko Passage shut in about S. ½ E.; windmills at Castri nearly in one, and nearly in a line with the hill behind them, bearing N.W. ½ W.

Having passed this rock, a vessel from the westward will meet with no other danger on the coast of Hydra, which is rocky, high, and bold.

STRATONISI.—Off the S.W. end of Hydra is a cluster of rocky islets, called by the Greeks *Stratonisi*; the largest, *Little St. George*. At a mile and a half to the eastward of this larger islet there is a sunken rock, which must be carefully avoided; and the Hydriotes say that, at W.S.W. two miles from the same there is a rock on which a Turkish line-of-battle ship grounded. It is, therefore, recommended to ships never to pass near these islets without a good pilot from Hydra.

CAMBRIAN SHOAL.—The little island, *Trikera*, is nearly half way between Hydra and Spetzia, and nearly half way between Trikera and the latter is the Cambrian Shoal, lying almost directly in the way of ships navigating between Hydra and Spetzia. It is about one cable in length from East to West, and about half a cable in breadth, and the least water found upon it was 22 feet 4 inches, with deep water all round. It consists of large square stones, and lies with the following bearings:—a small flat island, with a church on it, on with the sudden fall to the southward of Spetzia Poulo, S.W. ½ W.; Cape Orsin, N.N.W.

N.N.W. ¼ W.; windmills of Hydra a boat's length open of a large sugar-loaf island, on the N.W. end of Hydra, E. by N.; the south peak of the island of Trikera, E. by S.; the summit of Bella Poulo, S. by E.; the S.E. or bluff end of Thoko, N.E. by E. ¼ E.

SPETZIA, properly PETZA, is an island 4½ miles in length, from S.E. to N.W., and lying at half a league from the main: divided from it on the S.E., by a very narrow channel, is *Petza-Poulo*, or *Little Spetzia*, which is half a league in length. There has latterly been, in consequence of the late hostilities, a condensed population on these islands, said to amount to more than twice the usual number, which may be about 4000. Spetzia produces only a little wine, and has but one tolerable spring, which is near the middle of it. The well water is generally brackish. The men of this island, and of the neighbouring coast, have long been celebrated as intrepid and skilful mariners.

The village of Spetzia, consisting of 600 or 700 houses, is nearly a mile and a half from the easternmost point of the island, on its north shore. Between is a small creek, the harbour in which the native vessels lie, protected from all winds.

Spetzia is low; Spetzia Poulo is likewise low, and off its east end is a rock above water, from which the bottom is shoal for two cables' length.

At a mile off the N.W. end of Spetzia is the *Poivre*, a pyramidal rock, about 30 feet high above water, and stretching from it is a reef, hereafter noticed.

The anchorage of Spetzia is off the north side of the island, opposite to the village, in from 21 to 10 fathoms. "We," says an officer, "anchored in 10 fathoms, with the northernmost windmill on the island N.W. by W., the Fort South, flagstaff on the barrier S.W., eastern point of the creek S.S.E. It is not a good winter anchorage, as there is a long fetch from the N.W. out of the Gulf of Nauplia. A strong current sets to the S.E., to which a ship will often tend against winds from that quarter."

It is to be added that off the battery with the windmills is a shoal, with only 6 feet of water, extending about a cable and a half from shore, and which is dangerous for a ship bordering close on the island when working through the passage.

THE HARBOUR of SPETZIA is capable of containing thirty sail of merchant-vessels; they lie moored head and stern. On the starboard hand, going in, and at the distance of one cable from the shore, is a ledge of rocks, having over them only six feet of water. Ships of war anchor off the middle of the town in 14, 15, and 16, fathoms: the bottom of mud, sand, and small bits of coral. The nearer the island the better the ground: the anchors generally hold well. The passage lies N.W. and S.E., and is about two miles broad from shore to shore.

Cape Oursin, the south-easternmost point of the main land, is a white bluff point, with a church on it. At S. by W., two cables' length from it, is a rock, a little above water, and exceedingly dangerous by night: there is a depth of 17 fathoms close to it: the north end of Hydra kept a little open of the south end of Thoko clears it; or, steer W. ¼ S. from the passage between Hydra and Thoko, which will lead half a mile to the southward; and when the middle of Trikera Island bears E.S.E., haul up N.W. ¼ W., which will lead through the Spetzia Channel.

The channels and rocks about Hydra and Spetzia have, as yet, been imperfectly represented in the charts, from want of regular surveys: it appears that there are three rocks, of 3, 12, and 18, feet of water, among the Strato-nesia, near Hydra, and two of 21 and 23 feet between Trikera and Spetzia, not shown in the charts, but all of which are so steep-to that the lead, on approaching, is useless.

The currents hereabout are strong and uncertain. H. M. S. *Rainbow*, in 1832, when nearly midway between the point of Castri and the island Hydron, in the course of half an hour, was driven eastward by the current, in a calm, so close to Hydron, that she was prevented from being forced on shore only by the boats towing her head round. The depth of water was 25 fathoms, and 35 at less than a cable's length from the shore.

Should you be working in, through the Spetzia Channel, remember that the points on the main are very low but moderately steep. There is a low shingle point N.W. of the town of Spetzia, having over it four windmills; give it a berth of one cable. The two easternmost windmills, nearly in one, S. ¼ W., leads on a patch with 4 fathoms, about one cable from the shore of the main. Off the N.W. point of Spetzia, about one mile, is the high conical rock, called the *Poivre*, from which, at one cable to the S.E., is a reef just above the surface of the water. Between the latter and Spetzia is a channel of three fathoms

fathoms. The islet is barren and inaccessible: but broom-stuff is very abundant on the main opposite Spetzia.

CAPE SKYLLEO or SKYLLO, lies at the distance of 4¼ miles N.N.W. from the east end of Hydra. This cape forms the S.W. extremity of the GULF of EGINA or of ATHENS. The opposite promontory, on the east, is CAPE COLONNA, which bears from Cape Skyllo E.N.E. ¾ E. [*N.E. by E. ½ E.*] at the distance of nine leagues.

The small isle of ST. GIORGI, or ST. GEORGE D'ARBORA, lies without the line of the two capes, with its summit in lat. 37° 26′ 14″. The isle extends in a S.E. and N.W. direction, about two miles; it is rocky, narrow, and uncultivated, and occupied by only two or three families, who possess a few flocks of sheep and goats.

CAPE COLONNA, the antient SUNIUM, exhibits on its summit the ruins of the temple of Minerva, the remaining columns of which stand at the height of about 200 feet. These may be seen at sea from a great distance; and, when bearing N.W. by W. [*W.N.W. ½ W.*] they seem nearly half way between Gathronisi and Macronisi.

At a league to the westward of Cape Colonna is the small but elevated island *Gathronisi*, or the Isle of Asses, the *Provençale* of the French charts. Between this isle and the cape there is good anchorage in 8, 10, and 12, fathoms of water.

When the columns of the temple of Minerva bear W.N.W. ½ W. the cape will be open of Macronisi, and the Isle Gathronisi will be in full view. The magnitude of the latter, both in breadth and height, will then appear to be twice as great as that of Cape Colonna.

During a prevalence of strong easterly winds, when you cannot work up between Macronisi and Zea, you may anchor on the western side of Cape Colonna, in a sandy bay, where you will find from 11 to 13 fathoms, rather coarse sandy bottom, but the anchors hold well, with the ruins of the temple bearing E.S.E., the peak of St. George's Island S.S.W. ½ W., and the passage of Gathronisi shut up. Wood in abundance may be obtained, but from some distance up the mountains.* Off Cape Colonna there is a depth of 45 fathoms, at two cables' length from the shore.

GULF of EGINA.—The nearest part of the Island EGINA, now *Enghia*, which is near the middle of the Gulf, is 20 miles to the W.N.W. from Gathronisi. The island is about 6 leagues in circumference. The soil of its valleys and plain is stony, but the hills are, for the most part, naked rocks, scarcely affording rooting or nourishment to any shrubs. The port is on the West side of the island, and there appear to be some rocks in its vicinity. In this part the land, and, in general, the island, is well cultivated. The central valley presents an uncommonly beautiful appearance when covered with the fresh green of the rising corn. The sides of the hills being very steep, the farmers have been obliged to form them into terraces, which resemble so many rows of seats in a colossal amphitheatre.

The chief produce of the island is grain. It has also a few olive, almond, and fig, trees, and yields a small quantity of wine, but not enough for the inhabitants. The ordinary population is estimated at 4,000.

In the Roadstead of Egina you anchor in from 15 to 18 fathoms, tough clay. There is plenty of water between the islet *Mogni* or Moni and Egina, but not room for a vessel to beat in; if, therefore, you have not a leading wind, you must go round the north side; but do not go too high up toward the town in working, as there is much shoal water.

The population of Egina in 1825 amounted to about 10,000 persons.

ATHENS.—At the distance of 11 miles N.E. ¾ N. [*N.N.E.*] from the N.E. end of Egina is *Port Leoni*, the antient *Piræus* or harbour of Athens: south-eastward of this, within the distance of half a league, were two smaller harbours, or rather coves, *Munychia* and *Phalerus*, now *Stratiotiki* and *Phanari*. The waters of two rivers fall into Port Leoni,

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* We find, from a note in a Journal, that, in October, 1824, H. M. S. *Medina*, when within Gathronisi, run upon a sunken reef and knocked a hole in her bottom, which obliged her to run in, in order to save her from going down. The reef lies in the middle of the passage between Gathronisi and the main, and has on it, in some parts, only 7 feet of water. This, therefore, is not a fit passage for large ships, being very narrow, and with unsteady winds, if taken aback, there is neither room to veer nor stay.

The anchorage under Cape Colonna may be taken with northerly, but is quite exposed to southerly winds.

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those of the *Cephissus* and *Ilissus*; the latter after passing the south side of Athens, which stands inland at the distance of five miles from the port.

The *Piræus* or *Port Leoni*, the antient port of Athens, is a small gulf, three-quarters of a mile broad. A very few relics of the antient works about it are still visible. The remains of two beacons, which marked the channel into the inner harbour, are still above the water, and one of them is much dilapidated.* The Piræus, as all the world knows, was the Wapping of Athens. It had a theatre for the sailors and their sweethearts; and, no doubt, says Mr. Galt, was a dirty blackguard place. There is a monastery, a custom-house, some few other buildings, and a fountain, on the eastern and N.E. sides of the harbour.

The principal trade at the Piræus consists in the exportation of the productions of the Athenian territory, the principal article of which is oil. Attica, according to the fable of Minerva, is the native country of the inestimable olive, and the trees in the environs of Athens are very fine. They are much larger than those of Sicily, and the oil is better: the cultivation here is also, perhaps, more judicious and methodical. The low grounds, which are easily watered, seem to be uniformly preferred.

M. Fauvel, the French consul, gave, in 1814, the following account of the winds at Athens. "The North wind is very rare, except in winter; but when it comes, it always brings great cold. The winters are generally mild, though those of 1812, 13, and 1813, 14, were unusually severe: in the last, snow fell incessantly for eight days and nights. The months of December and January are generally attended with heavy and continued rains. In summer the most frequent wind is the S.W., which brings great heat; and the East wind is very frequent also in the same season; usually attended with rain. The scirocco or S.E. wind is not very frequent."

Between October and March the heat is moderate and the climate healthy. In summer the heat is, at times, intense.

The hottest hours of the day are still devoted to sleep, as they were in the times recorded by Xenophon. The Greeks still subsist chiefly on vegetables, and salted or pickled provisions.

Directions for the Piræus.—*From the Eastern point of the Island of Egina* [Enghia] to Port Leoni, the bearing and distance are N.N.E. ten miles. The entrance of the port is known by a small obelisk, built on a low point, by the company of H.M. Ship *Cambrian*, in 1820, on the starboard hand going in. The points that are shoal are plainly seen by the *green* water. They do not extend farther out than half a cable. The entrance lies E. by S. and W. by N., and has in it 9 and 10 fathoms.

There are three mole-heads, two of which you leave on the starboard hand and one on the larboard. When past these mole-heads, shorten all sail, luff up, and anchor in 7 fathoms. The ground is clear and good. There is room enough for three frigates. As the place is very narrow great care is required.

It is worthy of notice, that the winds do not blow or flaw out of the narrows of the harbour more than in any other place, which is frequently the case in most harbours having a narrow entrance. During the summer months the sea-breezes blow, nearly all day, directly into the harbour.

On going in, the larboard coast must not be approached closely, lest a sudden change of wind should compel you to anchor, for the bottom here is rocky. The starboard coast is the safest, and affords anchorage in 2 or 2½ fathoms, sand and oaze.

The middle or central channel of the harbour, with a depth of 9 or 10 fathoms, is 110 feet in breadth; the starboard channel, with 6 fathoms, 40 feet; the larboard, with 2 fathoms, only 25 feet.

To hit the middle passage in a clear night, the southern part of Little Koulouri must be brought to bear W. by N., and the course must be E. by S. Unless pressed for time, it is best to wait until day-light, or send torches to the pier-heads.

The course from off the Larboard Cape to the centre of the harbour, in 7½ fathoms, stiff mud, is S.E. by E. nearly one mile. From this spot the fountain or watering-place will bear E.N.E. ½ E., and the west point of the Old Galley Port (now filled up) N.N.E. A

* Formerly surmounted by figures of Lions, as described by the antients.

little

little to the northward of this spot is a patch of chalk ground, having over it from 3½ to 4 fathoms, and around it 4½ and 5 fathoms. At one-quarter of a mile farther in, and in the direction of the fountain, are 3½ fathoms, muddy bottom.

Sir John Franklin, in H.M.S. *Rainbow*, anchored in the Piræus for one night, in the summer of 1832; and he describes the entrance to this place, as known by a pile of stones on the south point; you may haul round this at three cables' distance, into the outer harbour, where there is anchorage in fine weather; but it is exposed to west winds, and the ground is said to be foul. A ship would have but little room to cast, even in mid-channel, if the wind set in strong. After the point above mentioned, on which the pile of stone stands, and two other points have been rounded, the houses of the Piræus open to view, as well as the collection of stones, or remains of pillars, on which the figures of lions formerly stood, and between which a ship must pass, in order to enter the Piræus. Before you reach these pillars, you will see a heap of stones, about 4 feet high, near the starboard shore, which must be left on the right hand on going in. These stones stand about 130 yards to the west of the southern pillar, and may be approached to the distance of 20 yards.

"The course must be nicely shaped from these stones, so as to steer exactly between the pillars of the lions, which lie nearly north and south from each other, and are only 35 fathoms apart. This breadth is reduced to 30 fathoms, or 180 feet, for a ship, in consequence of there being about three fathoms projection of the base of the rock from each pillar, over which there is not more than 15 feet of water.

"Having passed through this channel, the Piræus opens into a nearly circular basin, in many parts of which there is sufficient water for any ship to anchor. One of our 74 gun ships has anchored in it. We anchored about 250 yards within the *Narrows*, and immediately opposite the centre of it, in 8½ fathoms; but the best berth is about three cables' length to the S.E. of our anchorage, nearer to the hill on the S.E. side than the middle of the port, where there is 7 or 8 fathoms of water. There you would have room to veer, if necessary, to any extent of cable, and also to cast the ship with the land breeze, if you should think it proper to go out under sail. But this mode is seldom recommended to be taken, on account of the probability of the wind proving variable before you have passed the pillars of the lions and beyond the heap of stones to the westward of them. It is more adviseable to wait for a calm, either to warp or tow out, as we did.

"Our soundings in going in, through the outer harbour, were 15½, 16, 15½, 14½, 14½, 14½, 14½, 13½, 12½, 10½, 12, 11½, 4½, and 4½; the least water being about 12 fathoms distant from the outer heap of stones; then 6½, 10, 12½, 12, 12, 10½, 9½, 8½, and 8½, up to the *Narrows;* and within the pillars of the lions sufficient water was found, as far as the middle of the basin, and on the S.E. shore, for any ship. The water is even deep at the distance of 5 or 6 fathoms on either side of the walls that connect the pillars of the lions with the shore.

"It is shallow near the town and on the north side of the port. The Piræus may be considered an excellent harbour to refit a ship in; all the dangers of entering seem to be apparent, and the only cause for anxiety is its narrow entrance. Once within the walls, no sea can reach, that would either hurt the ship or stop the operations. The bearings from the Rainbow's anchorage were, the North lion rock, N. 87° W.; South lion rock, S. 72° W.; Southern extremity of Salamis, N. 85° E.; Anter Rock or Themistocles' tomb, S. 85° W.; Acropolis of Athens, N. 80° E.; highest part of Mount Hymettus, S. 81° E."—*Nautical Mag. Feb.* 1835.

The situation of a Lighthouse, as marked on the charts, is on the starboard or south side, rather more than a cable's length without the heads of the antient piers, or pedestals of the lions. This is expected to be restored, and lighted on the improved principle, so soon as the government has sense and spirit to effect it.

About two leagues North from Port Leoni is a castle on a hill, which is the mark for the port, off the entrance of which lie two islets, that look like two boats. Within these islets a fleet may anchor, in 10 or 12 fathoms, good holding ground.

KOULOURI, or COULOURI.—This singular island, which occupies an extent of three leagues from East to West, and 2½ from North to South, is divided by a narrow and crooked channel from the territory of Athens. Its western side forms Port Koulouri, a fine harbour, extending five miles in an East and West direction. On the North side is the *Gulf of Eleusis*, or *Bay of Lefsina*, in the strait leading to which, on the East, the water shoalens from 20 to 2½ fathoms, but again deepens inward. Here is a ferry to and from the island. On the West side of the entrance of this strait, at two miles from the Piræus, is an islet,

islet, *Psyttalia*, or *Little Koulouri*, which affords shelter from all winds, in 18 or 20 fathoms, hard sandy bottom. Plenty of fire-wood may be obtained here.

CAPE COLONNA to the N.E. and EAST. From Cape Colonna, described in page 212, the South end of the island *Macronisi* bears true East, three miles distant. The island thence extends two leagues and a half N.N.E. and is half a league in breadth: The ruins of an antient city may be seen here, but the island is low, rocky, sterile, and inhabited only by two or three Greeks from Zea, who cultivate a little grain, and tend a few sheep. It, however, possesses a fine spring of water. Near the North end are some rocks, which, on sailing in or out, must be cautiously avoided.

PORT MANDRI.—The coast of the main, directly opposite to Macronisi, forms the fine harbour called *Port Mandri*, which was surveyed by Don Dionisio Alcala Galiano, in 1803, and which forms a semi-circular bay, half a league in breadth, from North to South. The entrance is 5 miles to the northward from Cape Colonna. The general depths are from 16 to 6 fathoms, bottom of sand and clay. The best spot, in the last depth, is with the North point of the entrance bearing East, and the South point S. by E.

This is a most convenient and excellent port for a ship, if caught in a northerly or southerly gale of wind. The anchorage is completely sheltered by the island Macronisi, lying right before it. There is room enough for nine or ten sail of frigates. The general depth is from 15 to 6 fathoms, clay bottom.

Captain Stewart, R.N., has described Port Mandri as a good anchorage for a few ships, in from 9 to 16 fathoms, and an excellent place to run for with a northerly or southerly gale: the holding ground is good. In going in from the south there is nothing in the way, excepting a ledge of rocks close to, or at about a cable's length from, the South point of Macronisi, on which the sea breaks when the wind blows from the southward. You steer up between Macronisi and the main, and haul into the anchorage, which has a small church standing on its north point: this remark is necessary, for there is another bay, said not to be a good one, on the north side of the same point.

In coming to Port Mandri from the *northward*, a stranger should get over to the main well to the northward of the channel, as some rocks, with four feet over them, and breakers, lie between the north end of Macronisi and the main, but nearest to the island.*

Wood may be obtained in abundance, but there is only one small well, and in that the water is brackish, near the landing place, and no provisions nor refreshments; the nearest village being seven miles off.

PORT RAPHTI.—From Port Mandri the coast rounds to the northward, three leagues, to the entrance of *Port Raphti*, the most beautiful and commodious harbour in the Athenian sea. This port was surveyed by Captain Beaufort, in 1811, from whose chart the entrance appears to be rather more than a mile in breadth, but near the middle of it is a small island, having a mutilated statue of marble on its summit, which is 298 feet above the level of the sea. This, of course, is an excellent mark for the harbour, and it may be passed on either side, there being from 10 to 20 fathoms at a short distance around. The harbour is irregularly formed, having two indents or coves, one to the N.W. and the other to the S.W. It has also two small islets, within the Statue Island above-mentioned. At the bottom of the N.W. cove are some ruins, with remains of a pier under water, and a well, in which some water, remarkably soft and good, may always be found. Cattle may easily be procured here, and fire-wood in abundance. You may anchor, in good holding ground, at three-quarters of a mile within the Statue Island, either in 11 fathoms, with that isle S.E. by E. ¼ E. or in 8 fathoms, with the same isle E. ¾ N.

EGRIPO, or NEGRO-PONT, the antient EUBŒA, and now the chief portion of the department bearing the last name, (as lately established,) is an island not less than ninety miles in extent, from N.W. to S.E., but of very unequal breadths, varying from

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* A more particular description states that Mandri Bay affords a secure shelter from all winds for about twenty sail of ships anchoring close in shore, but farther out is exposed from S. by E. to S. by W. and also at E.N.E. The course between Macronisi and the main is North and South, where, in case of necessity, you may anchor. There are small shoals extending from the point opposite to the south end of Macronisi, but not more than half a cable.

Moored in 17 fathoms, fine black clay, best bower to the South, stream anchor N.E., the extremities of the bay S. ½ W. to N.E. ½ N. offshore one-quarter of a mile.

28 to 4 miles. Its southernmost point is *Cape Martelo*, off which lies the islet *Comondela* or *Karysto*, lying about four miles to the S.E. of a small bay, bearing the latter name. The easternmost point is *Cape Doro*, a rocky bluff, lying as shown in the table, page 207.

This Island was considered by the antients as the granary of Greece, and it still retains its fertility; although latterly, from misgovernment, want of industry, and internal commotions, its latent riches have not appeared. The level parts, where properly cultivated, are uncommonly fertile in grain, wine, oil, and all kinds of excellent fruits: its mountains are elevated, and during a considerable part of the year, several are covered with snow. The Turkish language is here in general use.

PETALIA, or PETALI ISLES.—We now re-commence with the PETALIA, or PETALI ISLES, on the S.W. coast of Negro-pont.

The isles thus named lie off *Cape Roxo*, the S.W. point of Negropont, and form a groupe of two large and six small ones. The larger isles are to the south, and the smaller to the N.W. and N.E. The whole occupy a space of about four miles each way, and the interval between the larger and smaller isles forms an anchorage more than a mile in extent every way, the depths in which vary from 30 to 10 fathoms.

This is a good place to run for should you be caught with adverse weather from the southward, and not be able, or not wish, to pass *Cape Doro* before night.

The channel between Negropont and the Petali Isles is narrow; its ground appears to be uneven, and it is not adviseable, in general, to attempt a passage through it. The channel between the two larger isles is rocky and quite shoal. You will, therefore, enter by sailing outside of the largest and westernmost island, and haul in for the anchorage by leaving the N.W. islet on the larboard hand.

The northern passages between the islets are nearly clear, and have sufficient depths for large ships. The water appears as if shoal off the south points of the two islets lying to the N.W., but it is clear, and the bottom of white sand. Give the outer islet a berth of one-third of a cable, and the next two-thirds, and you will pass in more than 5 fathoms. The isles are uninhabited, have plenty of wood but no water. The bottom, generally, is a mixture of clay and sand, and good holding ground. Latitude of the anchorage, 38° 2′.

In standing toward the anchorage between the Petali Isles, you pass to the westward of the great one, as above, then steer to the north-eastward, and pass through between the first small island and the great one; or you may pass to the westward of the small one. If to the westward of the latter, it is better to pass outside the second small island also, which is very low; haul round it and anchor between it and the middle island, which lies between the two great ones, in from 15 to 20 fathoms of water, and good holding-ground. There is anchorage farther to the eastward, but there are 22 to 27 fathoms of water. When at anchor there will be three small isles to the N.E.; the two small ones which were passed to the westward; and two large and middle islands to the south-eastward.

There are passages between all the small isles, though the points of some of them look white and shoal, but have 4 and 5 fathoms of water within half a cable's length, and from 15 to 20, and some much more, in the centre.

With leading winds, a frigate or smaller vessel may find a safe passage between the islands and Negro-pont. The part where a frigate could not beat through does not exceed a quarter of a mile. The course is S. by W. Keep close to the islands on first entering the channel, and there will be from 5 to 6 fathoms of water.

In the bay to the N.E. of this channel there is a very fair anchorage, in from 20 to 15 fathoms, good sticky bottom, with the passage shut in. This anchorage is land-locked, except from the W.N.W., and if necessary a ship with that wind may run through the channel and proceed to sea.

The islands are uninhabited, have no fresh water, but wood may be cut as convenient.

KARYSTO BAY, at three leagues to the eastward of the Petalis, is three miles broad at the entrance; it is quite open to the South and S.E., but may afford occasional shelter.* The shore on the West and N.W. is rocky, but there is anchorage off the latter, in from 20 to 9 fathoms, sandy ground.

* As in the case of the *Galathée*, mentioned in page 201.

If

If not able to beat through the Doro Passage, against a strong northerly wind, you may anchor in the Bay of Karysto, distant from *Inglesiko* or Karysto Island about six miles, where you may choose your distance from the shore in regular soundings: and it is worthy of remark that, during the northerly gales, the wind is always variable and light under the high land of Karysto. Captain Stewart recommends the Petali Isles, but it would be impossible to arrive at them in bad weather from the northward.

ZEA, the antient CEOS.—The N.W. point of this island bears E.N.E. [*N.E.* ½ *E.*] 23 miles, from *St. Giorgio di Arbora*; E. ½ N. [*E.N.E.* ½ *E.*] 11 miles, from the South point of *Macronisi*; S.E. ½ S. [*S.E. by E.*] 6 leagues from Port Raphti; and S.S.E. ½ E. [*S.E.* ½ *S.*] 9 leagues from the centre of the Bay of *Marathon*. The island is 11 miles long from N.E. to S.W., and its greatest breadth is about 6 miles. The narrowest part of the channel between it and Macronisi is 7 miles broad, perfectly clear, and safe. The only port of Zea is that of *St. Nicolas*, on the N.W. side of the island, which exhibits a harbour light, of an inferior description. The town is in a centrical situation, 3 miles to the S.E. from the port.

Mr. Galt has said of this place, The harbour of Zea is one of the finest ports in the Archipelago, and capable of sheltering a great number of vessels from every wind. The island itself is beautiful, and differs greatly from Hydra. It appears to have been originally barren; but, in the course of the many ages that it has been inhabited, the precipitous sides of the hills have been formed into innumerable artificial terraces. The town stands very high, elevated above sixty of these terraces. Its form resembles that of the city of Hydra; but it is inland, and stands much higher. The ascent up it is through narrow and dirty lanes, but the higher part is large and respectable. It is said to contain not less than a thousand houses. The population of the island (1810) is estimated at upwards of 5,000, all Christians; for the religious government and instruction of whom there are thirty-four churches, five monasteries, &c.

The vestiges of several antient towns and castles are still to be found, and on the eastern shore are the ruins of the temple of Neptune.

The chief production of the island is valonia, of which it formerly exported a considerable quantity to Italy. It also exports, in common years, two or three cargoes of grain, chiefly barley, and 3,000 or 4,000 barrels of wine, of an excellent flavour on the island, but which it sometimes loses at sea, where it is apt to become not only sour but putrid: this, however, may be prevented by brandy. The inhabitants have not the reputation of being very active or enterprising.

The cattle of Zea are very small, but well formed. The price of an ox, in 1810, was about 35*s*., and of a good sheep 5*s*. As in the islands, generally, a little silk, with some cotton, is raised here; and the British agent has two or three orange and lemon gardens.

Zea is better adapted for a commercial seat than to furnish much itself to commerce. Its situation is singularly happy; and by its excellent port one might almost conclude that it could not fail to become a place of great trade. It commands equally the Gulf of Egina and the Strait that separates Negro-pont from Greece: but its people want spirit and industry.

The country has, at first, a sterile and unhappy aspect, but improves in appearance on entering. The mould is banked up on the mountain side with stone walls, forming borders about 10 feet wide, and upon which the grain is sown and cultivated. The chief produce of the island (1818) is *vellani*, (the oak producing valonia,) cotton, and a little barley. A little silk is also produced in this island, which is the first spot, according to antient tradition, where that material was discovered.

A few gardens, situated in the valley, supply the inhabitants with abundance of currants, citrons, melons, lemons, and pomegranates: but no pasture, during the greater part of the year, can possibly be obtained. The cattle feed chiefly upon bushes, which are of the nature of a prickly and small leaved oak, which abound here; its acorns offer a delicious mast for the swine, which rove over the land in vast herds.

A rugged and fatiguing road leads up to the little town, the only one in the island. It consist of about 1,000 dirty huts, built with flat roofs, and laid out in irregular, narrow, and unpaved, streets or lanes, in which you stumble over pigs, dogs, and children, at every step: the surrounding eminences are crowned with windmills. The number of inhabitants (*Zeots*) is about 4,000, who are generally civil. Most of the meat consumed here is from Andro and Negro-pont. Their wood is also from the latter. The British vice-consul (a

Greek) is supported by the ships which stress of weather obliges to cast anchor in the port, each of which, bearing the British flag, pays three dollars. On the house which he inhabits the English jack is proudly displayed.

The entrance of the Harbour is but one-third of a mile broad, being contracted by a narrow tongue of land that extends to the S.W. from the North side, to the same distance. The general depths, on rounding into the harbour to the N.E., are from 27 to 16 fathoms, and thence toward the watering-place, which is in the easternmost part of the bay, (in the S.E. angle) they decrease to 5 fathoms.

This harbour may be known, on approaching from the westward, by a round mountain with a church on it; so soon as you see the mountain, you may run close in by the land until the harbour opens; otherwise, the entrance being narrow, you may run past without seeing it. On the north side of the entrance stands a small white church, and upon the high land are windmills, above-mentioned, which you should bring to bear to the S.E. until the church at the entrance bears N. by E. Should the wind be westerly, you may haul up round the North point, and anchor in the northern part of the harbour, where you may lie sheltered from all winds. Ships bound to the westward should take this station, because, with a fair wind, they can thus quit the harbour with facility. Those bound eastward had better anchor in the south part of the harbour, or they may lie at half a cable's length from the S.W. point, with a hawser on shore upon it, and an anchor to the N.E. in 15 or 16 fathoms of water.

Captain Stewart says that, the port of St. Nicolas is a small good port, wherein a man-of-war may anchor. You must haul close in round the north point, and anchor in the middle of the north part of the harbour. It is best to make fast a stream cable to the N.W. shore. There is an excellent run of fresh water on the south side of the harbour, but you must roll your casks a long way through rushes, to get at it. There is also excellent water in the eastern corner of the harbour; here you have a less distance to roll your casks on shore; but you must roll them a little way in the water, it being shoal at the head of the bay.

The harbour is difficult to make out by a stranger, until he is close to it, as the entrance cannot be seen on coming from the *eastward*. The best mark for it is, the small white church standing on the N.E. point of the entrance. Half-way up the island, you will see the town on the side of a mountain. On the top of the island are more than twenty windmills, facing to the N.N.W. The centre of the town on with the centre of the mills, bearing nearly S.S.E., leads directly to the entrance of the harbour. On the starboard hand, in the south side of the bay, are a few small houses; and, on coming in, when you see a small house on each side of the entrance, you cannot be deceived, there being no other houses hereabout.

In mid-channel, between the outer points, are 2½ fathoms, at a ship's length off. The common method of mooring is to let go your anchor in mid-channel, and moor with a fast to the rocks. There is sufficient room for mooring in mid-channel, with your own anchors; but if you want to unmoor with the windlass, you would require a hawser to steady ship.

Ships bound to the westward lie in the easternmost part of the harbour, and those bound to the eastward in the westernmost part. All the ground is good, and if you haul in close on shore you lie land-locked on either side. The most inconvenient wind here is from the North.

It is somewhat dangerous to attempt entering during a gale, the entrance being so narrow, and the anchors not apt to hold, by reason of the depth of water; so a fast on shore, as soon as possible, is necessary.

The little Bay, called Port Kabia, or *Kavia*, on the S.W. side of Zea, affords occasional shelter from the N.E. and East.

There is a large flat rock, (not noticed in the charts,) over which the sea breaks heavily, lying about three cables' length off the shore, and on the larboard hand when going into Port Kabia. It bears from the West point of Zea S.W., and from the S.W. point of the same island N. by E. A danger is reported, also, to exist between Zea and Thermia, with the S.W. point of Zea bearing N. 20° W., and the N.W. point of Thermia S. 10° E.: and off the East end of Zea, about E. by S., *true*, from the town, is said to be a sunken rock.

THERMIA.—This island is divided from the south side of Zea by a clear channel, 5 miles

5 miles in breadth. It is irregularly formed, and from the South point extends four leagues to the North: it has one town on the N.E. side, and one village, *Silacca*, in the valley of Merca: the number of inhabitants is under 4,000. The land, in general, is well cultivated, and produces barley and fruits, besides some wine, silk, honey, wax, and wool: it abounds in partridges. Barley is the principal production, and of this considerable quantities are exported. There are warm springs here, considered as salutary in the spring and autumn, and from these *(thermæ)* the island derives its name.

Thermia has several spots of anchoring ground for small vessels:—on the eastern side are two or three islets, close in shore, to the westward of which is a beach, with tolerable ground; but East and S.E. winds blow on shore. North of these islets is a cove fit for small craft. On the South of the island is another, *Port Cambrica*, and to the West another, *Colonna*.

ANDRO or ANDROS.—Point Guardia, the N.W. end of the island Andro, bears N.E. by E. ½ E. [*N.E.*] 7½ leagues from the North end of Zea, and it lies in lat. 37° 57′, long. 24° 42′. The island thence extends seven leagues to the S.E., and is divided from Tino by a little *bocca* or strait, obstructed at its entrance by some rocks called the *Kaloieri*, or *Monks*. The town, *Andro* or *Castro*, is on the eastern coast, and the population of the island amounts to about 18,000. Besides the town this island contains 66 villages. The summits of the mountains retain the snow for several months in the year. The inhabitants live on their own industry, and employ but little money in the trade of their few boats. The main produce of the island is silk, of which a thousand okes are annually exported; which, on the average of fifteen years, has been sold at 12 piastres the oke. There are many gardens; and many lemons are gathered, which are exported. Here much wine is made, but little exported, for the inhabitants are great drinkers. They sow wheat and barley together, of which mixture they make their bread; but they raise not enough for their support, trusting to Anatoli, Volo, and Egypt. Their only port is *Gavrio*, or *Port Gabriel*, on the western coast, two leagues to the southward of the N.W. point; but this is not on the peopled side of the island. It is partially sheltered by several islets, facing the S.W.

" *There is a bay on the S.W. side of Andro*, near Port Gavrio; there is, also, a cluster of islets. Between the latter and Andro is anchorage, in from 18 to 15 fathoms of water, excellent holding-ground. The bay is perfectly secure from N.W. to S.E., but exposed to southerly winds. Ships in entering should pass to the southward of the islets, and work up for a sandy bay, above which is a white square tower. There is a passage to the northward of the islets, but it is not so wide nor so clean as the other; for it has a long ledge, with only 6 feet on it, and 5 fathoms close-to, about mid-channel, bearing from the bluff point E.S.E. On this ledge H.M.S. *Martin* struck on going in, although with two Milo pilots on board: but, in approaching this anchorage from the southward there cannot exist any danger; as H. M. ships *Cambrian*, *Seringapatam*, and *Rose*, worked in when blowing strong. The marks that we anchored with were, the middle of the large islet S.W. ½ S., and the south point of the bay S. by E. ½ E."—*Mr. Wood's Journal.*

The passage between Andro and Tino lies E.N.E. and W.S.W. It is about half a mile wide, with 21, 25, 31, and 37, fathoms of water, hard bottom. This depth was found in the middle. At nearly half a cable's length from the S.E. point of Andro is a shoal with breakers. On the eastern side are two small islets,[Kaloyeri]. The current was found to be running very strong to the westward.

The BOCCA SILOTA, or DORO PASSAGE, which is two leagues in breadth, separates Andro from *Egripos* or *Negropont*, the antient *Eubœa*. The surface of the latter presents an agreeable prospect; its woody sides forming a contrast with the dry rocky appearance of the neighbouring isles.

The current, in general, runs strongly to the southward in the Strait of Silota, or Doro Passage, particularly in April; insomuch that, with easterly gales, a vessel should bear up for Zea.

The KALOYERI or *Monks*, nearly midway between Cape Doro and Scio, have been surveyed by *Captain Beaufort*, and found to exist in latitude 38° 9′ 33″, longitude about 25° 17′; consequently about nine leagues E. by N. from the north end of Andro, and 10½ leagues E.S.E. ¾ E. from Cape Doro.

Captain B. says, " They consist of two detached rocks, three-quarters of a mile asunder: the largest is a barren volcanic heap, about 40 yards high, and free from all hidden dangers; the

the other is small and low, with a short reef, to the southward, of about half a cable's length.

"There certainly may be sunken rocks in their neighbourhood, but they were undisturbed by our boats, which were employed in searching for them in every direction, and to a considerable distance."

XIII.—The Islands of the Archipelago, North-eastward of Cape Malea or St. Angelo, including the Island Scio and the Gulf of Smyrna.

GEODETIC POSITIONS.	Latitude N.				Longitude E.		
Milo; Monte S. Elias	36°	40′	27″	..	24°	23′	14″
Steeple of the Town	36	41	42	..	24	29	36
Anti-Milo; summit of the northern part	36	48	0	..	24	13	0
Argentiera or Kimoli; Road on the S.E.	36	48	0	..	24	36	30
Polino; highest land	36	47	57	..	24	40	0
Siphanto; summit	36	58	4	..	24	42	36
Afiti-Perros; summit	36	59	40	..	25	3	27
Paros; summit of the mountain	37	2	46	..	25	11	18
Naussa	37	7	0	..	25	15	20
Rabbit Isle	37	9	26	..	25	17	54
Naxia; Monte Dea	37	1	51	..	25	31	4
Serpho; highest point	37	10	24	..	24	29	36
Kali-podi	37	18	15	..	24	31	48
Syra; summit	37	28	56	..	24	55	28
Rhenea or Delos; centre	37	25	0	..	25	15	0
Myconi; a Mount in the N.W.	37	29	16	..	25	21	22
Tino, Road of S. Nicolas?	37	31	30	..	25	7	30
Ghioura or Joura; summit	37	36	36	..	24	43	13
Kaloyeri or Monks	38	9	33	..	25	17	0
Scio, Island of; Cape Mastico	38	8	0	..	26	3	0
Cape Melano or N.W. point	38	34	0	..	25	51	0
the Town	38	22	20	..	26	9	0
Egry-Liman; Entrance	38	34	0	..	26	22	0
Psara or Ipsera; town	38	33	0	..	25	34	0
Kara Bouroun	38	41	0	..	26	23	0
Kanlu Bouroun	38	40	30	..	26	26	0
Sahib Isle; summit	38	39	43	..	26	28	15
Smyrna; British consul's flagstaff	38	25	36	..	27	6	45

The climate of the isles, in the Archipelago generally, is more temperate than that of the neighbouring continents, winter being scarcely felt even in the most northern, while the heats of summer, in the southern, are attempered by the prevailing northerly winds, blowing over a tract of sea. In this season, however, sudden squalls and thunder-storms are frequent, and sometimes do much damage. In winter the navigation is more or less dangerous; for the waves, where they have little room to extend themselves, form a confused sea, rising to a great height, and breaking with great fury against an opposing coast.

MILO, once famous for its freedom, its riches, fertility, and population, with its 20,000 inhabitants and subterraneous heats, produced, almost without intermission, wheat, barley, cotton, exquisite wines, and delicious melons; and all its productions were of incomparable excellence: but the population now amounts to little more than one-tenth of what it then was, many fine portions of the country cease to be cultivated, and fertile valleys have become morasses. This island was visited by Mr. Turner, in 1812; and he describes his passage toward it, and the island itself, as follows:

On sailing along the southern coast of Cerigo, (1st June, 1812,) we descried a small and neat looking town *(Kapsali.)* On each side we saw distant mountains covered with snow; those of the Morea on the left, and the Cretan mount Ida on the right. On the 3d of June, a strong N.E. wind stopped our progress, and, being off Milo, we at noon fired a gun for a pilot,

a pilot, who came out to us. The sailors of Milo are reported to be the best pilots in the Archipelago.

In the afternoon we anchored in the Bay, which is one of the best harbours in the Archipelago, being about six miles long (from N.W. to S.E.) and one and a half broad, and not more than three-quarters of a mile wide in the entrance. The country on the coast of the bay is very hilly, and must have been beautiful when well cultivated and covered with vines, as it was when the island was well peopled; but the plague made such ravages in it a hundred years ago, that the population of the whole island is now only 2300; whereas, before that time, the town alone contained 10,000. The depopulation has been more systematically promoted by the badness of the water, and the unwholesomeness of the air, which is said to be strongly impregnated with sulphur.

The interior of the island is better cultivated than its first appearance would lead the traveller to suppose. The conditions of labour are very patriarchal. The labourer divides the produce with the proprietor, but provides all the necessary animals and implements. Its staple produce is cotton, which is cultivated almost exclusively by the women. It grows a sufficiency of corn, (mostly bearded wheat,) to furnish a supply to two or three of the neighbouring islands, and contains thirty windmills.

MILO, the capital, which is built on a plain, about two miles from the coast, at the bottom of the harbour, to the S.E., is now almost in ruins, and the narrow streets are choked with the materials of fallen houses. The inhabitants, however, appeared cheerful: the women (who in the evening sat spinning cotton at the doors) were affable, and willing to show the inside of their houses, which were generally neat and clean. They are a fine race of people: the men strong and active in their limbs, and upright in their carriage; and a great proportion of the women could boast of beauty.

CASTRO, the second town on the island, is near the entrance of the harbour, on its eastern side. In the neighbourhood of this place, and indeed all over the island, are scattered many small chapels, of which, formerly, one was appropriated to each family. They are contemptible buildings, about 8 feet high and 16 long, with arched roofs. At the bottom of the northern side of the mountain, on which stands Castro, are ruins of the antient city, but they are few and unimportant.

Mount St. Elias, the highest mountain in Milo, which is upon the eastern part of the island, is the highest in the Archipelago, next to Athos in Roumeli, being 2036 feet above the level of the sea. Its summit commands a most extensive prospect of the islands of the Archipelago, of which twenty-seven may hence be seen. On the S.E. coast of the island are two warm springs, described by travellers, which are both salt, and immediately close to the sea. The greatest extent of the island, from N.E. to S.W., is 12½ miles. The land may be seen at 16 or 18 leagues off, and in form appears like two peaked hills, which distinguishes it from any of the neighbouring islands.

ANAKES, &c.—At a mile from the S.W. point of Milo lies an islet named *Paximadi*, or *Paximari*; and, at S.W. by W. ½ W. nearly four leagues from the same point, lie the *Anames*, a cluster of detached rocks, the most of which are high and above water. From these rocks the island Anti-Milo bears N.N.E. ¾ E. and Falconera N.N.W. Their true position is, latitude 36° 33′ 45″, longitude 24° 5′ 45″, and their *true* bearing from Anti-Milo S. 14° W.

At about three miles from *Cape St. Remo*, the S.E. point of Milo, lie two or three barren islets, called *Peristeria* or the *Pigeons*. The channel between is clear and deep.

ANTI-MILO, or ERIMO MILO, is an uninhabited islet, or high round rock, five miles to the north-westward of *Cape Vani*, which is the western extremity of the Port of Milo, and very useful as a sailing-mark, in proceeding to the harbour. Do not pass too close to it with easterly winds, as you will be liable to calms and sudden gusts of wind. Having advanced toward the port, you will see on the western side of the entrance, (Cape Vani,) a high peaked hill and craggy rocks; and, on the east side, two small islets, which appear in one. From off the west head your course into the harbour is S.E. Both sides are steep-to, and there is a depth of 40 fathoms, at a cable's length from the shore.

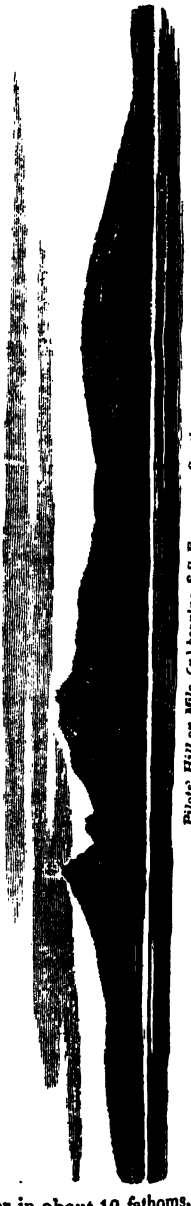
Within Cape Vani, or the N.W. Head, at the distance of nearly three miles, are two bluff points, from which the land trends to the eastward, and forms a bay. In the east part of this bay, at about two miles from the said bluff points, is the best anchorage; 20 fathoms, muddy bottom, the two bluff points in one with the top of Anti-Milo, bearing N.W. ¼ W., and some fishermen's huts bearing E.S.E. ½ E. In the western part of the bay is a cove, or creek,

creek, where vessels may careen with safety. Provisions may be had here in small quantities for two or three vessels, but neither wood nor water, unless in quantities still smaller, and the latter is very brackish. There are no fortifications, nor is there any trade, and you may land in any part of the harbour. The male inhabitants are mostly fishermen and pilots for the Archipelago.

You may anchor abreast of the fishers' huts on the east side of the harbour, in 10 or 12 fathoms of water, good ground: but beware of standing too far to the southward, for there the ground is rocky. Here you may ride near to, or at a distance from, shore, the ground being clear and good. You may also lie on the west side, close by the point at the mouth of the haven, with a hawser on shore, and an anchor to seaward; but with a northerly wind the sea here runs high, and there is, also, a ledge of rocks, which, although there is water enough over them, may damage your cables.

The N.E. extremity of the entrance is named *Cape Lakida*, and the two rocks or islets lying without it, the *Aktariez*, the latter extend toward Anti-Milo: between them and the point is a good passage, which is frequently used, but that between the two rocks is dangerous.

There is a sandy bay on the south side of Milo, where you may lie sheltered from northerly winds, in from 24 to 20 fathoms, not far from shore; but you may not come here with westerly or southerly winds.



Pilots' Hill on Milo, (r.) bearing S.S.E. *See the next page.*

Remarks on the Navigation to Milo, &c., *from the Journals of Mr. Wood, Captain Stewart, and other Officers of the British Navy.*

Mr. Wood says that, on proceeding for Milo, and having passed to the northward of Cerigo, an E.N.E. course from that island will lead directly to Anti-Milo, leaving the Ananes about three leagues to the southward. The island Milo will then appear in two hillocks, and a third will be seen, which is Anti-Milo. They can be seen fifty miles off. If going into the harbour, pass between Anti-Milo and Cape Vani. The latter is very remarkable, from its bold, rugged, and red, appearance. With fresh N.E. winds do not round it too close, as you may be becalmed: it is steep-to, and there is no anchorage near it.

The harbour is spacious, but rather inconvenient from its great depth of water. A ship may work in or out so long as she can carry sail, the shores being quite bold. Give the white point on the eastern shore a berth of one cable and a half, and round it in 10 fathoms; then haul up for the N.E. part of the harbour, where ships of war generally anchor in 15 fathoms, good holding ground. The summit of Milo town will then be in sight over the land.

At the S.E. end of the harbour, off the old town of Milo, is anchorage in 10 to 15 fathoms, muddy bottom, but it is very inconvenient for getting under way during northerly winds: all the rest of the harbour is very deep, having from 25 to 40 fathoms of water.

Captain Stewart describes the Harbour of Milo as capacious and excellent; he says, "The water, in general, is too deep; but there is anchorage for any number of ships at the top of the harbour in from 17 to 25 fathoms. The best anchorage is to haul in to the northern part of the harbour, and drop your in-shore anchor in about 19 fathoms, then three-quarters of a mile off shore, little more or less. There are many wells round the harbour, but in general the water is not good. After the first rains in winter, and till April, there are many runs of water on the south side, under Mount Elias."

"There

"There are two islets [*Aktaries*] off the harbour's mouth:—*no passage between them*; but you may haul close round them: the best and most commonly used passage in, is to keep to the west of them. I have sailed through the other passage: there are some rocks above water, (but near the shore of Milo,) which seem the only danger in it. You need not use a lead in working in, as there is 40 fathoms as close to the shore as you ever stand with a ship: give the larboard inside point of the harbour a berth of two ships' length as you haul round it to your anchorage. You may also anchor in the S.W. corner of the harbour, where are the best wells."

The officers of H.M.S. *Naiad*, by their observations, made the houses on the beach of Milo in 36° 43′ 34″ N., 24° 23′ E., and they say that the largest ships may work in or out with ease. The best anchorage being on the N.E. side of the harbour, in 17 to 7 fathoms, grassy bottom, and good holding-ground. You should anchor before the town of Milo is on with the landing-place houses, as it shoalens very fast, and 10 fathoms is quite close enough for a frigate to weigh in with southerly winds.

Again, *In order to sail into the harbour of Milo in the night*, during a N.E. gale, observe to bring the highest part of Milo to bear S. ½ W.; then steer for it, until Anti-Milo bears W.N.W. The rocks or islets on the eastern side of the entrance will then bear E.S.E.; then steer S. by E. ½ E., sailing close past them; and, when abreast of them, the lofty pointed hill, on which the pilots live, will bear S.S.E. Then steering S.E., about three miles, will take you abreast of that hill, and in the entrance of the harbour S.S.E. until Anti-Milo bears N.W. ½ W. Next round the point to port, and steer E.S.E. for the anchorage. Keep the lead going as you approach the eastern shore, and let go the anchor the moment you get 15 fathoms. Twice the ships' length more in-shore are 8 fathoms; and, at the same distance more off shore, are 25. From 8 fathoms to the shore the distance is three-quarters of a mile, and here is a gradual decrease of water, with good holding-ground.

Ships from the West, desirous to run in by night, may bring Anti-Milo to bear N.W. ½ W., and then steer S.E. ½ E. for Pilots' Hill: when abreast of it, steer as above directed. The shore of the entrance is bold and rocky, and there is no danger while you keep the ship's sides clear of it.

ARGENTIERA, or KIMILO.—This island is separated from the N.E. side of Milo by a channel about a mile in breadth. It has been called *Argentiera*, from silver mines which formerly existed. The island is of an oval form, about two leagues long from N.E. to S.W., and contains about 700 inhabitants, of the same description as those of Milo. Like that island, also, it is entirely volcanic, and without trees, but produces corn, some cotton, and grass. It is equally deficient in fresh water, and for this article depends on the rain-water preserved in cisterns. The island affords the substance called kimolian or cimolian earth, which is a decomposition of porphyry by subterraneous fire. Its little town is on an eminence on the S.E. side, and has a good road, sheltered by the island *Polino*, or *Brusiata*, or *Burnt Island*, which is half a league distant, and uninhabited. In the space between Milo, Argentiera, and Polino, are two islets, named *Spartineo, or St. Giorgio*, and *St. Istad*, which lie to the southward of Argentiera, and in some degree shelter its harbour. There are several other islets, *Semené*, between it and Polino. The road of Argentiera lies between it and Milo: in order to anchor there, you must run between the islands, and will perceive, on the east end of Milo, a white church, abreast of which is the Road, with 13 or 14 fathoms of water, good ground. Be cautious to avoid some rocks lying near the S.W. end of Argentiera.*

The channel between Argentiera and Milo is very narrow, and vessels must keep over to the Milo side, that of Argentiera being shoal. There is anchorage off a beach in Argentiera, west of *La Galera*, in from 6 to 12 fathoms, good holding-ground.† This road is called that of *Polino*, and in it the S.E. and S.S.E. winds only can blow home. East of this road is an islet, with a church upon it, dedicated to St. George. To the

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* From Argentiera the brilliant summits of the Candian mountains are distinctly visible, though nearly thirty leagues off, being covered with snow during the greater part of the year.

Polino, from its great sterility, has been called *Isola Brusiata* or *Burnt Island*. It is said to have possessed a valuable vein of cornelian stone,

† The Galera, or Galley, is a shoal off the S.E. point of Argentiera, upon which the sea breaks with the least wind.

N.E. of this is another, near the shore of Argentiera, off which merchant vessels may lie, by making fast to some stones placed for the purpose, sheltered from every wind excepting the N.E. and E.N.E. which blow home. There is good bottom, in 7 to 5 fathoms.

Ships of war anchor between Argentiera and Polino, or Brusiata, in 17 to 20 fathoms, with the village bearing W.N.W., and Little Brusiata E.N.E.*

SIPHANTO.—The S.W. end of this island is five miles to the N.E. from *Cape Prasa*, or the N.E. end of Argentiera. Its extent in a N.N.W. and S.S.E. direction is 8 miles. It has about 7,000 inhabitants and five villages, of which the principal is *Kastron* or *Castro*, on the eastern coast. The mountains have been noted for their mineral contents: gold, silver, iron, lead, loadstone, and marble, having been found here. At present Siphanto produces corn for its own consumption, silk, honey, cotton, and fruits. At a short distance from the N.W. end of the island is a rock on which the sea breaks.

The principal roadstead is formed by an islet named *Kytriani*, on the south coast: to enter into it, if approaching from the westward, advance close to the S.W. point of Siphanto, and you will see the islet; then run in between, and anchor in 12 or 15 fathoms, and carry a hawser on shore to Kytriani, by which, and an anchor to seaward, you may ride, and be in readiness to proceed either to the eastward or westward.

PAROS, ANTI-PAROS, and NAXIA.—PAROS, although so celebrated in former times, for its white marble, &c., has dwindled into comparative insignificance; more especially since 1770, when the forces of the Russian empress occupied it as their head quarters in the Archipelago. *Parekia*, or *Parchia*, is the site of one of the most splendid cities in the Archipelago, though now having but very few tolerable buildings. The Greek cathedral here, however, called the *Panaghia*, containing also an altar for the catholics, is the most superb church to be met with in these islands.

The air of Paros is salubrious, and the soil naturally so fertile, that four times the number of present inhabitants might comfortably subsist on the island. The present inhabitants are of bad character: but the women seem industrious: their exports are cotton, caps, and stockings.

The island is now inhabited by about 7000 persons, reputed to be among the poorest in the Archipelago. Its extent is 10 miles from N.E. to S.W., and much of it is uncultivated. The productions are, barley, a little wheat, cotton, a little wax and honey, other kinds of food, and some wood. On the N.E. side of the island is *Port Agousa*, or *Nausa*, one of the best ports in the Cyclades, and large enough to contain a fleet of ships in safety. The town, *Nausa*, is unhealthy, being in the neighbourhood of marshes. On the western side of the island, about half-way down, is the harbour and town of *Parekia*, or *Parchia*; and on the S.E. side, within the islet *Treo*, or *Rabbit Isle*, is the port of that name, wherein the Turkish galleys formerly rendezvoused in their annual visit to the Archipelago. Besides the towns, above-mentioned, Paros contains five poor villages.†

On advancing to Nausa there will be seen a high mountain, with a break in-land; bring this to bear south-westerly, and steer for it, which will lead for the harbour. On the left hand, going in, is a high round islet. The land is bluff and table.

To sail into the harbour in the night, bring the highest part of Paros to bear S.W., and run in on that course until within the entrance of the harbour; then haul over to the western side, round the point to starboard, and haul to the West and N.W. Anchor in 8 or 9 fathoms, between the island and the west side of the entrance; the entrance shut in.

This place is perfectly safe, and convenient for ships of war in want of water, but there is no fuel.

The course into the harbour of Nausa, in mid-channel, is about S. by W. ½ W.; it is a clear working channel, more than a mile wide, bold-to on both sides, particularly on the

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* "The anchorage between Argentiera and the island of Polino (called *Isola Brusiata* by the pilots) was much used by the French. I have not been there in a ship, but went from Milo in a boat. Their ships used to lie in 18 fathoms, tolerably good ground: but it seems to me a wild place, and exposed to the northerly winds. There is a clear passage between Milo and Argentiera, keeping nearly amid-channel; it is narrow, but has 5, 6, and 7, fathoms."—*Captain Stewart.*

† The BOÏDI, BOUI, or BUEY ROCK, in latitude 37° 10′, or 37° 11′, lies nearly true West from the north end of Paros. There is no danger about it, and it may be approached on all sides near enough to rub it. Its S.E. part is the lowest.

west.

west. Off the low black point, on the western side, and a boat's length from it, are 3 fathoms; at half a cable's length, 5 fathoms; at a cable's length, 8. The best anchorage is in the N.W. angle of the harbour, sheltered from all winds, in 5 to 9 fathoms, good holding-ground: bearings from this anchorage, the points of the angle S.W. and E. by N.; the town, which faces the entrance, S. by E. ½ E.: around it are 5 and 6 fathoms, at a cable's length off shore.

Merchant-vessels generally anchor to the S.W., between two islets with ruins on them, in 4 and 5 fathoms of water. Between these islets is a channel of 3 fathoms, and between the isles and point, 2½: to the southward of them are 7 and 8. A sunken rock is said to lie in this channel. From the N.W. angle to the town are 7 to 12 fathoms, and again to 8 within half a cable's length of the old castle. Off the town you are exposed to northerly winds.

Water may be obtained at the town, and generally good, but not with a northerly wind.

This harbour is easy of access, with bold shores, good holding-ground, and secure from all winds in the west or larger anchorage. There is also a tolerable anchorage on the eastern side of the harbour; and to the southward of the two western islets, for small vessels of war and merchant shipping: but there are rocks to be avoided in the way of going to both. The *East rock* lies in a straight line, and almost half-way, between the inner point, on the eastern side of the harbour, and the outer islet, on the same side. There are only two feet over it, but it may be passed on each side, either by keeping close to the point or to the islet. The latter is most to be recommended, there being from 8 to 11 fathoms of water between the island and rock, and only from 4 to 6 between the rock and the point.

The western rock lies in a straight line between the two western islets and the town, at about one-quarter of the distance from the island. It has only one foot over it, and generally breaks. To clear it, on going to that part of the harbour, keep in mid-channel, or half-way between the town and small western islet, until the round tower is on with the windmills in a line to the eastward of the town, and bearing S.E. by E. ½ E.; then haul up, and anchor half-way between the western islets and south shore, in 5 to 7 fathoms. In the middle is clay bottom, but hard sand in-shore.

There is a good watering place at the town, but the water is sometimes bad. Casks may be filled with hoses in the boats. Little or no fuel can be obtained; but bullocks, good fresh beef, vegetables, poultry, and fruit, may be had. No forts nor trade.

Marks for anchorage in 6 fathoms, soft mud, on the N.W. side of the harbour, perfectly land-locked;—the centre of the town S. by E., large mountain about the N.E. end of the town S. by E. ½ E., the two points of the harbour shut well in with each other, E.S.E. ½ E., a white monastery close to the sea N. by W., the peak of a hill, the highest near the harbour,* W. ¾ S., the cupola of a small church on an island in the harbour, S.S.W. ½ W. This isle, small and round, is the westernmost of the two on the western side of the harbour.

You may anchor in any part of the harbour in summer; but it is adviseable for the winter anchorage, only just to bring the outer points of the harbour together about E. by N., and not shut them in so far as above; as there will be less difficulty in getting out with strong southerly winds, there being little room, and the water shoalens fast.

Remarks on Naussa, by Captain Stewart.—"You may work into or out of this harbour with great safety, but the entrance is so exposed to northerly winds, that, whenever they blow you cannot easily work out: however, a frigate can accomplish it, by carrying double-reefed topsails. In coming in you haul round the low point on your right hand; and, leaving an island with an old storehouse on your left, stand into 7, 8, or 9, fathoms, where you moor, protected from all winds: at least six or seven line-of-battle ships might lie hereabout. But for the exposure to northerly winds, it would be exceedingly good anchorage immediately off the town, in the centre of the harbour: here I once lay in 13 fathoms."

PAREKIA, or Parchia.—The harbour of Parekia is on the western side of Paros, about half-way down the coast, and on its S.E. shore are the remains of the old town, *Paros*. The port lies nearly East and West, one mile in extent; it is open to the West,

* At the foot of which are a number of mud-houses, once Russian stores, close to the beach.

on its south side are several rocks, and a reef stretches out to some distance from its N.W. point. In the middle of the harbour are from 8 to 10 fathoms of water. The best anchorage is in 7 fathoms, on the N.E. side, with the town bearing S.S.W.

At a mile without the entrance, on the west, are several detached rocks and islets, occupying, altogether, an extent of half a league, but between which are passages into the harbour. The safest way is, however, to leave them, when entering on the west or starboard side. It was on one of these that the French ship, *Le Superbe*, was lost, in 1833, as heretofore shown in page 201.

PORT TREO, on the S.E. side of Paros, lies to the southward of the village of that name, and is sheltered on the east by three islets, of which the two largest are named Treo and Pigeon Isles. This is a good summer harbour, but open to S.W. and E.S.E. winds. The best anchorage is between the large island and the watering-place, (which is easily known by the houses on the beach,) in about 8 fathoms of water, nearer to the islet than the main. It is an excellent watering-place for two or three ships. There are two good channels out; one between the small and long islet, and the other between the large islet and Paros. The first is foul to about three or four cables from the smaller islet; the last is pretty clear. No danger a-mid-channel.

The latitude of the watering-place, by observation, is 36° 59′ 19″. As noticed above, the anchorage is very good with shore winds, but it is exposed from S.E. to W.S.W. There appears to be no danger in working between the islands and Paros. From the anchorage, in 8 fathoms, the Eastern part of Paros touches the Western point of Naxia, bearing N.E. ¼ E.; the northern small islet N.E. by E. ½ E.; watering-place N.W. A capital run of good water, leading your hoses from the well into the boats; but you must water with on-shore winds. No wood, no provisions, and very few refreshments, here.

From the anchorage in 9 fathoms, sandy bottom, the western part of Paros bears W. ½ S., one mile, just within the two islets, and with the west point of Treo Isle S.S.E. This anchorage is open to S.W. and southerly winds, which occasion considerable swell, and is unsafe in winter. Water is easily obtained in fine weather, but neither stock nor vegetables can be procured.

Of Port Treo, Captain Stewart says, "The best anchorage is exactly between the largest island and the few houses which stand on the beach, nearer the island than the shore, in 8 fathoms. At these old houses is the watering-place, which was where the Turkish fleet used every summer to water, and their ships lay in and off the harbour whilst the pasha's tribute was collecting from the islands. This water is excellent, and is a fine fresh run, brought by the Turks, in an aqueduct, from some abundant springs in the gardens above the old houses: they had also made an arch, for boats to lie under and water, but the Russians have ruined it. In coming for this port from the northward, you must pass to the east of the two smallest islands, and haul in to the northward of the southernmost island, keeping about, at least, three or three and a half cables' length off the south point of the middle or east island. As you would only enter this way with a leading wind, keep a-mid-channel till inside, then steer for the anchorage.

"The passage between the south island and the island of Paros is quite clear, and the widest; but as you would lie in this harbour only with northerly winds, you will seldom use it but to go out, as it is rather narrow to work in by, unless you are obliged. I do not think you could water here with southerly winds, as I conjecture there must be much surf."

Besides the Port of Treo, on the S.E., there is a cove, that of *Marmora*, on the East coast of Paros, at half-way down, opposite to Naxia; and there is another, under the N.E. point of Paros, called that of *Santa* [Agia] *Maria*. *In coming from the northward* for Port Treo, you steer close along the shore of Paros, leaving on your right the anchorage of Sta. Maria, which, as well as the bay between that and the north point of Port Marmora, is sheltered from all winds but N.E., and has good anchorage. *Port Marmora* is small, and open to the East; however, Naxia is opposite to it, at only three or four miles off. The soundings, as you steer down, will be from 10 to 20 fathoms, according to your distance; and keeping the Paros side on board is necessary, because nearly in mid-channel, and E.S.E. from Port Marmora, there is a rock above water, and some breakers extending to the South of it, with shoal water around. There is also a rock, and some shoal water, extending off Cape St. Procopia, which is the projecting cape of Naxia, opposite the bay between Port Marmora and Santa Maria: there is, however, a good passage between the rocks off Cape St. Procopia and the mid-channel rocks, and good anchorage in northerly winds under that cape. The anchorage on the side of Naxia is described hereafter.

ANTI-

ANTI-PAROS is divided from Paros by a narrow and dangerous channel. This island is two leagues long from North to South, and is represented as a solid block of marble, having one village with 200 or 300 inhabitants. The productions, of course, are trifling; a little poor wine and barley. There is a celebrated grotto here, 100 yards in length, and 80 high, covered with stalactites.

Although not supporting more than 200 or 300 inhabitants, the fertility of the soil, and sufficiency of irrigation, would enable the island to support 2000. The greater part of the present population employs itself in fishing, cutting wood, and attending flocks and herds. Formerly it was miserably pillaged, both by Turks and nominal Christians, who found it a convenient lurking-place. Of its former prosperity the ruins of several villages are a sufficient attestation. The isles *Strongylo* and *Spotico*, to the S.W. of Anti-Paros, are barren.

NAXIA is the largest island of the Cyclades, and one of the most fertile. Its greatest length, from North to South, is 17 miles, and its greatest breadth, from East to West, about 12. The north point is in latitude 37° 12′, the south point in 36° 55′. Rocks, of forbidding appearance, seem to interdict an access to Naxia, yet the island is diversified by hills, valleys, and plains, is well wooded and watered. Its highest summit, *Mount Jupiter*, is 3,310 feet above the level of the sea. The island contains granite, serpentine, and marbles; exports oil, fruits, some cheese, and emery, of which there is a mine on the west coast. Its wine was compared by the antients to nectar. Besides the city, *Naxia*, which is situate on the N.W. coast, the island contains thirty-five villages. The whole population is from 15,000 to 20,000. The island abounds in oranges, but particularly in lemons; the juice of which, and distillations from the rind, are sent to Russia. A good crop of grain yields sufficient for six months for the island. The deficiency is drawn from Volo, in Eastern Greece, from Egypt, and Natolia or Anatoli. In all the island there is no part fit for ships to anchor in.

The town of NAXIA is defended by a castle. This port had formerly a jetty, level with the water, but which is now several feet below its surface. It still, however, receives small craft. North of the town is the fountain of *Ariadne*, a scanty rill, and opposite it is an islet, on which is a marble tower, and other ruins of marble and granite, supposed to have belonged to a temple of Bacchus, who, according to the mythology, was born on this island.

The channel between Paros and Naxia has, generally, from 8 to 20 fathoms of water.

In coming from the southward, between Naxia and Paros, care must be taken to avoid the low ledge of rocks, nearly in mid-channel, and before-mentioned; they are very dangerous, being shoal from a half to three-quarters of a mile around. It is best to keep Paros on board, as above-noticed, it being bold-to. When you are abreast the western point of Naxia [Cape St. Procopia] you are to the northward of the danger. There is also a ledge projecting from the western point of Naxia, in a N.W. direction, which should not be approached nearer than in 6 or 7 fathoms: and when to the northward of the point you may haul in, and anchor off the mole, in 9 to 14 fathoms, but quite exposed to North and N.W. winds.

There is a capital anchorage, if caught with a North, N.E., or N.W., gale, to the southward of the west point of Naxia; for, though you shoalen your water from 13 to 5 or 6 fathoms, in rounding it, you again deepen it to 8 and 9, and will carry that depth from one and a half to three-quarters of a mile from the beach. There is anchorage in 7 fathoms, clay and mud, with the west point of Naxia N.N.W., a small rocky islet S. by E., ledge of rocks in the channel on with the largest Treo islet S.W. by W. ½ W. No wood nor water.

GUPHONISA PASSAGE.—The cluster of isles to the S.E. of Naxia form what is called the *Guphonisa Passage*. The principal isles are the *Great* and *Little Guphonisa*, *Stinos*, *Heraclia* or *Raclia*, and *Karos*, besides which there are five small islets. There is deep water about them all, and between them and Naxia the depths are, generally, from 20 to 40 fathoms, clear ground.

But there is a rock, at the distance of a mile and a half from the south point of Naxia, which was first discovered by Mr. Chrystal, master of the ship *Delos*, in 1829. The vessel struck upon the rock, was on it two hours, and Captain Chrystal was obliged to throw out a part of his cargo, in order to lighten the ship. It appeared to be about 100 feet long, and 40 wide,

40 wide, with 12 feet over it. The Delos drew 13½, and hung under the mizen. It now appears in the chart under the name of *Delos Rock.*

SERPHO, an island 6 miles long, and 5 broad, lies at the distance of 8 miles N.N.W. from the N.W. end of Siphanto, (see page 224,) between the parallels of 37° 7′ and 37° 13′. To the S.W. point of the island the bearings and distances from Anti-Milo are N.E. ¼ N. 7 leagues; from Falconera E.N.E. ½ E. 32 miles; and from Kaiméné or Belo-Poulo E. ½ N. 46 miles.

Serpho is rocky and unproductive: its population amounts to about 3000. The mountains are remarkably rugged and steep, and among them are mines of iron and loadstone. The people seem as rough as their native mountains, but the women are courteous. Some wine is exported, but the produce of corn is scarcely equal to the consumption of the island. Cheese and wool, with honey and wax, are the other products. The onions are much esteemed.

The only port is on the S.E. side of the island. The village above it stands high up the mountain. On coming from the west the port may be known by a little round black islet, *Bovi* or *Poloni*, lying about 2½ miles to the eastward of it.

The harbour is exposed from S.S.E. to E.S.E., and a swell sets in during gales of wind. The entrance is wide and clear. On the left hand going in is a rock even with the water's edge, but it is out of the fairway, and to be regarded only in turning in. To arrive at the anchorage, you pass a point on the south or left side, which extends low to the sea, but has no danger beyond half a cable's length. On the higher part of this point stands a white church. Having passed this point you may anchor any where inside, or to the northward of it. The hawser will be taken on shore to the point, which will bear South, thus sheltered from every wind. If you moor, you must lay the western anchor well in, and your eastern one so as to secure your casting clear of the point, in case of getting under way with a northerly wind, which frequently blows very strong.

The north winds pour over the mountains with great violence; it is therefore best to incline to East, as well as because on the West there is a shoal even with the water's edge, close in-shore.

The isle *Serpho-Poulo* or *Little Serpho*, lies at the distance of two leagues East from the North end of Serpho, and nearly half-way between Serpho-Poulo and Thermia, 4 miles N.W. by N. from the former, is the islet *Kali-podi*. These islets contain numerous wild goats.

SYRA is triangular; three leagues long from North to South, but about one and a half in breadth. *Point Akrateri*, the S.W. point of this island, bears E.N.E. ¼ E. [*N.E. by E. ½ E.*] five leagues from Serpho-Poulo; and the summit of its high land, which is toward the N.E., is in latitude 37° 28′ 56″. The island is rocky, mountainous, and destitute of wood; but, being well watered and cultivated, produces barley, wine, figs, cotton, olives, and wheat. Figs, both fresh and dry, are a great article of consumption, and the fishery is very abundant. The air is moist, and cooler than in the neighbouring islands. The inhabitants, characterized as a shrewd and clever people, are mostly Roman Catholics; they amount to about 4000, and carry on a considerable trade in corn, &c. with the Black Sea, Smyrna, and Egypt. There are traces of abandoned villages in several parts, and the depopulation has been attributed to the frequent incursions of corsairs.

The western coast of the island is generally rocky, and a dangerous reef, under the name of *Kindynos*, extends westward from the land, at seven miles northward from Point Akroteri, above-mentioned. There is a little harbour, *Port Phinica*, within these rocks; and an anchorage, *Port Abyla*, under the S.E. point of the island; but the only harbour for shipping is the port on the *eastern* side, a plan of which is given in the Atlas of Captain Beaufort. The breadth of the entrance of this harbour is three-tenths of a mile, and the land forms a bay, of which the greater part is open to the east: but off a projecting point, on the north side, is a little isle, with a small chapel on it, and within both there is a cove, wherein the holding-ground is good, and the shelter for small vessels excellent. Captain Beaufort says, that the port is very secure for vessels of light draught: even one or two frigates may find shelter here, and refreshments may be readily procured. The position of the chapel above-mentioned, is given as lat. 37° 26½′, long. 24° 55′. Variation, in 1812, 14° W.

From the anchorage, in 5 fathoms, within the isle lying off the north shore, the land has a very picturesque appearance, as shown on the plan of the harbour. On a central cone is the town, reaching half-way down from the summit, having just to the east of its base three windmills;

windmills; another windmill crowns the summit of a second conical hill on the same side. The soundings farther in shoalen northward to two fathoms.

To the eastward and south-eastward of Syra are three islets, which should be cautiously approached on advancing from the westward. Of these the northernmost is *Gadaronesi*, lying half a league to the south-eastward of the port; and the southernmost is *Nata*, at 4½ miles S.E. by E. from the S.E. point of the island: the middle one, *Papousi* or *Scarpa*, lies off the S.E. point; it is a large rock, of a triangular form, steep on the south side, and sloping toward the north, like Portland, in the English Channel: hence it has been called, by British sailors, *Portland Rock*.* *Nata* is a flat islet, about 20 feet above the level of the sea; so that by night, or in thick weather, it must be cautiously avoided: the sea around it is clear, so that you may sail close to it; notwithstanding which it is best to sail near to Syra, whether proceeding eastward or westward, and you will always pass safely.

Another description is as follows:—The harbour of Syra is a small but secure harbour for merchant-vessels and small vessels of war. They lie at the north side, moored head and stern, in 5 fathoms, muddy bottom. Ships of war should not anchor within the chapel on the small islet, as the ground is so much broken by the frequent anchoring of vessels that the anchors will not hold. It is best for large vessels to anchor with the church and bluff point to the N.E. of it in one, in 9 fathoms, or farther out in 13, 17, or 18, fathoms, good holding ground, but exposed to N.E. and E.S.E. winds. There is no danger in riding here. Give the chapel or church islet a berth of half a cable on rounding it, and luff up.

On weighing with a scant wind, if you cannot weather the islet Gadaronesi, you can run between it and Syra, clear of danger: but observe that, at a boat's length from the latter are some rocks above water, steep-to. Next haul out to the S.E., round Gadaronesi, taking care not to approach nearer than two-thirds of a cable; or, you run to the southward between Syra and the outer islet, called *Nata*, taking care to avoid a rock, just awash, at about two cables' length from the north point of Nata. In passing, give the S.E. point of Syra a berth of a cable. There are 12 fathoms in mid-channel. Supplies of cattle and other refreshments may be obtained in small quantities.

The harbour is much exposed from N.N.E. to S.E. There is no danger in working in. *From the anchorage in 13 fathoms* the chapel upon the islet, on the starboard side coming in, bears N.E. by N.; the westernmost of the four windmills N. by W. ½ W.; the church on the western shore W.N.W.; windmill, on a peaked hill above the town, North. Merchant-vessels anchor more to the N.W., with an anchor down and fasts to the shore, sheltered from all winds.

The leading winds for the harbour are from N.N.E. to W.S.W. *Ships coming from the N.E.*, after rounding a bluff point in 25 or 30 fathoms, may sail along under the land, which is steep-to, leaving the islet of Gadaronesi on the left, and go round the small isle, with a white chapel on it, at about two-thirds of a cable. Bring the chapel to bear E.N.E. and anchor in 7½ fathoms, with the best bower, and moor to the north shore, a cable each way, sheltered from all winds.

Beyond the rocky point, on which are some buildings, N.W. of the ship about a mile, and in the bottom of a little bay, is a well at the foot of a remarkable fig-tree. Draw-buckets and gang-casks are necessary. The water is not very good. The landing-place is at the storehouses on the N.E. side of the bay.

This port, being small, is generally crowded. Anchoring in the roads is not good, for there is no room to weigh and work out; and N.E. winds blow with great violence. Fresh beef, vegetables, poultry, fruit, and wine, are cheap: the latter is very good.

Vessels calling here to make a short stay may find tolerable good anchorage between the Gadaronesi and Syra, in 12 and 14 fathoms, sand and grass. By anchoring in mid-channel, a ship will be enabled to weigh with any wind.

DELOS and MYCONI.—At 4½ leagues eastward of Syra is the Island RHENEA, or the *Greater Delos*, which is divided on the East, by a narrow strait, from the Lesser Isle, properly *Delos*. These are now called, by the Turks, the *Sedili Isles;* they are very low, occupying an extent of 4 miles from North to South, and, although once celebrated, are

* A small tower, with a fixed light, has been established on the north side of Gadaronesi, and which will be very useful to vessels passing between Tino and Myconi, toward the Strait of Scio.

now

now deserted, and described as insignificant and uninhabited rocks, although ruins are scattered all over them. The larger isle, however, serves the people of Myconi as pasture for their sheep; and on the smaller one are some fine ruins of the temples of Apollo and Diana, of whom it was the reputed birth-place. The strait between the two Delian isles forms a good harbour. Here vessels belonging to Myconi are secured in the winter-season.

The Strait has from 35 to 20 fathoms of water, but the bottom is rocky in many places, and it appears to be an unsafe place for men-of-war.

The anchorage is between Great and Little Delos. You enter between the two islands from the southward. There is no hidden danger in the channel. The shore is bold on both sides. With a northerly wind a strong current runs to the southward. There is an islet, nearly in mid-channel, at the north end of Delos, with a channel on each side, but it is shallow and fit for small vessels only. The water between Great and Little Delos is deep, until you get nearly up to the islet above-mentioned. Anchor in 9½ fathoms, and you will then be about two cables' length from Delos, and have the channel open between Tino and Myconi.

There is a passage between the two islands, which was sounded by Mr. Burt, master of H.M.S. *Rose*, but the pilots, not being aware of this, generally go round the south side, and so work up to the anchorage, as above.

MYCONI.—The Island Myconi [ant. *Mico* and *Myconus*] is of a triangular form, and 7 miles in length from East to West. It is divided from Delos by a channel of one mile in breadth, at the southern entrance of which are two islets, the *Prasonisi*. The town and port are on the western side of the island. This town is described as a neat place for its extent, and contains about 6000 inhabitants, with many churches, but the latter are small and rudely constructed. The males are generally merchants and seamen. Here is a large monastery, the Greenwich Hospital of the island; it is a white edifice, dedicated to the Panagia, or Virgin, and contains seventy members, regulars, students, and helpless old men. Besides this, at no great distance from it, is a convent for females, which, like the monastery, is both a religious institution and a retreat for the indigent.

Mr. Galt says, that Myconi produces annually about 5000 bushels of barley, 2500 of wheat and barley mixed, and 1000 of pure wheat, 1000 lb. weight of figs, and a small quantity of an excellent species of little white beans, [lupins?] which would probably grow well in the West Indies. Of the herb orchilla, 700 cantars are collected every third year. But the most considerable and celebrated production of Myconi is its red wine, of which about 500 pipes are made annually. The quality resembles that of claret; but the inhabitants have a way of making different kinds; and, as the clarety is the most expensive to them, they will rather cheat you than give it genuine. When the grapes are culled and pressed, while yet fresh from the vineyard, the claret-flavour of the wine is obtained in its greatest perfection. The only fresh water obtainable here is rain water, which is preserved in cisterns.

In the road before the town ships may lie well sheltered from winds at N.N.E., East, and South; but S.W. and westerly winds blow directly in. If, when to the eastward of Myconi, and bound to the island Scio, or elsewhere, and taken with an easterly wind, you should be desirous of taking shelter in this road, you should proceed along the north side of the island, until you arrive off the N.W. point, then luff up to the southward, and anchor before or a little to the southward of the town, in from 15 to 20 fathoms, where the ground is good.*

But the *Bay of Myconi* is calculated particularly for a summer anchorage, or as an occasional place of shelter from strong north-easterly or easterly winds; the water being too deep, without anchoring so close to the shore that a ship could not weigh with a strong wind blowing in. But even in winter you have shelter from N.N.W. and N.E. winds; though quite open from N.W. to S.W. The N.E. angle of the bay is the best place to anchor in with northerly winds; and between the island and the town with southerly or S.E. winds. At half way between the town and island are 25 fathoms, sand. You may anchor in the bay in 17 fathoms, at about three cables' length from the nearest land,

* Cape Troulos or *Troulo* is the N.W. point of the island: to the east of this is an inlet, open to the north, called *Port Palermo*, which affords shelter from southerly winds. On the south coast, near the western point, is a roadstead, *Port Ornos*; and, at four miles more to the east is another, that of *St. Anna*.

with

with the N.W. point of the island N.N.W. ½ W., Myconi town S. by E., extremities of Delos W. ½ N. and S.W. by W.

Of this place, Captain Stewart says, "In summer and autumn, as the northerly winds are strong and constant, it is best to lie close up under the north side of the bay, your in-shore anchor close in, in about 17 or 18 fathoms, your outer in about 25; or you may anchor in about 20 fathoms, off the town, half way between it and the island: the former is the best in the summer season, the latter in winter; the holding-ground excellent. Going out of Myconi, after rounding the small island off the south point of the bay, you may, if bound to the southward, steer through between Delos and Prasonisi: the passage is quite clear, if you keep a-mid-channel."

Remarks from Mr. Wood's Journal.—Myconi presents a good anchorage for vessels coming down the Archipelago with strong winds. It may be taken either behind the N.W. point of the island, in 10 fathoms, or off the ten windmills before the town in 15 fathoms. The ground is most excellent. The general depth all over the bay is from 15 to 26 fathoms. It is open only from West to N.N.W. H.M. ship *Cambrian* laid here during heavy gales, sleet, and snow storms, with lower yards and topmasts struck. The best place to anchor in is with the ten windmills all in one, bearing about S.E., and the Tino and Myconi Passage just shut up, bearing North. You will then be in 15 or 16 fathoms, and nearly in the middle of the port, or rather nearer the town. Here you lie in perfect safety, secure from the winds. The town is a dirty stinking place, and has been noted as a receptacle for goods piratically obtained. Water and provisions, generally, are scarce.

Vessels proceeding to the southward should give the reef, [*Kavaronesi,*] high above water on the west side of the bay, with a church on it, a berth of one cable and a half, and thence steer down between the islet *Praso-nisi* and Anti or Little Delos. The passage lies N. by E. and S. by W., is a mile and a half broad, and appears to be free from danger. If working, do not stand too close into the bay on the south side of the island, with the church on it, as there is a little shoal water. *Praso-nisi* is a high reef of rocks lying East and West across the passage.

At about a mile from the east end of Myconi is the islet *Tragonesi*, a rugged and precipitous rock; and, at 3½ miles to the south-eastward of this, are two other barren rocks, named the *Adelphia*, or the *Brothers*, toward which you should not approach without caution.*

TINO, the antient TENOS, lies to the northward of the Delian Isles, and is separated from Myconi by a channel five miles in breadth. This island is 5½ leagues in length, from S.E. to N.W., and its mean breadth is nearly two leagues: it is mountainous and rugged, particularly on the north coast, which presents perpendicular rocky cliffs. The western part, which is low, is by far the most fertile, and has two rivers, running to the northward, which have their sources near the centre of the island. The wild animals here are jackals and hares; the domestic ones a few horses, some good asses and mules, and hogs. The inhabitants rear neither turkeys, geese, nor ducks, and but few fowls; the sea around the island is scantily supplied with fish, but affords coral. The population is from 23,000 to 25,000, all Greeks, and of both the Greek and Roman churches: they bear the best character amongst their countrymen for honesty, courage, and industry. The women are renowned for their beauty. The productions are wine, oil, and silk.

The island has three towns, and sixty villages or hamlets. The capital, *St. Nicolas*, on the S.W. side, is the residence of the Greek archbishop, the European consuls, &c. It has seven Greek and two Catholic churches. The little bay, on which this town is situated, is the only place of the island visited by foreign vessels, and has a lazaret for the performance of quarantine. The town occupies the site of the antient capital, and most of the houses, as well as those of the villages, are of white stone. Hence it has a showy appearance, which causes great disappointment on entering, the streets being very narrow and dirty.

The north wind prevailed here most violently during Mr. Turner's visit in June, 1814, and Mr. T. says, that this wind is much more violent here than elsewhere, owing to two immensely high mountains overhanging the town, between which it pours down in such a torrent, that many people said they wanted very much to go to the villages above, but dare

* These islets have commonly been represented under the name of *Stapodiæ*, which should be exclusively applied to the rocks off the S.W. end of Nicaria.

not

not climb the mountains from fear of being blown down by the wind, which has frequently happened.

The inhabitants manufacture a great quantity of silk, grown on the island, and the silk gloves and stockings which are made in it are of excellent workmanship, being of a very close texture, and uniting strength with fineness. Tino is one of the best cultivated islands of the Archipelago. The fields, as at Malta, are divided by stone: the exterior, therefore, presents but a rocky aspect, but the interior has a very rich soil. Of the wines there are two sorts, a red and a sweet wine. The sweet wine is famous throughout the Levant, and the red has an agreeable flavour, with a good body. Figs compose one of the largest of the exports. Wheat and barley are both raised in considerable quantities.

The shores of Tino do not form one single harbour; but there is a roadstead, that of *St. Gianni*, or *St. John*, on the S.E. side, where you may anchor in from 15 to 20 fathoms of water, close by the shore, and be sheltered from N.W. winds; and to the northward of the point you may anchor right off a valley, sheltered from S.W. winds. The Road of St. Nicolas is to the northward of the point called *Cape St. Nicolas*, though it is low and flat. The castle stands on a hill, and bears from this road nearly N.E. There is a road, *Palermo*, on the north side of the island, at 4 or 5 miles from the N.W. point, but it is quite exposed to northerly and easterly winds.

Remarks from Mr. Wood's Journal.—Before the town of St. Nicolas, you may anchor in 17 or 18 fathoms, good holding ground, with a convent bearing N.E. and Cape St. Nicolas S.E. You may also anchor in a bay to the eastward of the cape, in from 12 to 15 fathoms, clay bottom, the back of the town bearing N.N.W., and a conical hill E. by S. This situation is, at all times, to be preferred, because most convenient for getting under way. Between the conical hill and Cape St. John there is a ledge of rocks above water, at half a mile from the shore. They are steep-to.

It is most remarkable that the wind comes down in *tremendous squalls*. I have never met any thing like it in any other part of the Archipelago. Frequently, on coming down with all sail set, in fine weather, and before rounding the island, we have been reduced to main topsail and foresail, and main deck guns nearly in the water. Whenever the island is capped with clouds, in northerly winds, I strongly recommend reducing sail in time; but, as you clear the island, you will be enabled gradually to make sail until every thing is set.

If bound hence to the southward and westward, sail close along the islands of Myconi and Delos; for by proceeding thus you will avoid the squalls.

These remarks have confirmed those of Captain Stewart, who had previously said, "The Bay of St. Nicolas is under the south-west side of the island, and can be used only in summer and autumn, during the prevalence of the north winds. This is a very mountainous island, and the wind comes down in astonishing gusts; so much so, that I have been under courses at first weighing; and carried double-reefed topsails and top-gallant sails so soon as I passed from under Tino to the eastward. You must drop your anchor to the northward, off the town, in as little as 17 fathoms; your outer anchor will then be in about 24 or 25 fathoms. The inner anchor will appear too close in; but it is the best way, as otherwise you will drift off if you have a strong North-easter, even though the ground is good and holds well. You must not lie here with southerly winds, as there is not the least shelter."

From another Journal.—"Anchored in 37° 33′. At the south side of the island are three open bays, good in northerly winds, but the central one, whence the town is seen, appears the best. Anchored there in 12 fathoms, with the extreme points of the bay S.E. by E. ½ E. and N.W. ½ W., South point of the island N.W. by W. ¼ W., a remarkable rock on a hill to the northward of the town N. by E. ½ E. The soundings are very regular to the shore.

"*In standing for St. Nicolas' Road*, from the S.E., approach the shore no nearer than three-quarters of a mile, on account of a reef extending from a point to the eastward of a remarkable conical hill, on which is a tower. Pass this and you will see the town of St. Nicolas over a sandy beach. There is also a bay here, which do not mistake for St. Nicolas, but stand north-westerly, until you lose sight of the town behind a high bluff, which round at one-third of a cable, just outside a small rock above water, and you will again see the town on the beach, extending from N.E. to North, immediately under a very high mountain (above-mentioned), with a rugged rock on its summit. Anchor with the

town

town (which you stand for) N.E. and the bluff point S. by W. The bay is very open, and therefore unsafe in most winds, and especially the heavy gusts that come off the mountains; but it is good in violent north-easters, or a snow-storm, when it would be dangerous to run for Paros or Syra. Boats land any where before the town; and to the N.E. is a little harbour for them.

Water is scarce and procured with difficulty. Wood is dear. Provisions scarce."

For a vessel between Serpho and Siphanto, and bound thence eastward, through the channel between Myconi and Tino, the direct course will be E.N.E. [*N.E.* ½ *E.*] but it is to be recollected that the rock *Nata* lies nearly in the fair-way, as shown on page 229. Having passed the south side of Syra, steer toward Tino, as thus you will avoid some foul ground, near Rhenea. From the channel between Tino and Myconi to *Cape Mastico*, the south end of the island Scio, the course and distance are N.E. by E. [*E.N.E.* ½ *E.*] 17 leagues.

GHIOURA.—The Island THERMIA, and ZEA, the next island to the northward, have been described on the preceding pages, 217 and 218. In a centrical situation, between Zea and Tino, Thermia, Syra, and Andro, is the smaller island GHIOURA or JOURA. This island, which is moderately high, is 3½ miles long from East to West. It is barren, almost uninhabited, and has no harbour.

DIRECTIONS FOR SAILING FROM THE SOUTHERN COAST OF THE MOREA TOWARD SMYRNA, &c.

The channel between Zea and Macronisi is the one generally used by vessels bound to Smyrna, Mytilen, and Constantinople, to the eastward, as well as to the island Skyro, the Gulf of Salonica, and the north-western ports.

On advancing toward this region, from the southern coast of the Morea, you will bear in mind the instructions already given in pages 199, 200, and 201. With a northerly wind it is adviseable to sail close to Cape Matapan, and thence between Servi and Cerigo; because on opening Cape Malea, the wind generally is found to be a point or two more to the eastward, and you would then be 6 or 7 leagues directly to the windward of a ship which had passed to the southward of Cerigo.

From Cape Malea or St. Angelo to the Macronisi channel the course is nearly N.E. [*N.* 33° *E.*] and the distance 28 leagues. In sailing on this course you will pass Karavi and Falconera on one side, and Kaiméné or Bello Poulo on the other. These islets are described on page 208. On approaching St. Giorgio di Arbora, by some called the *Cardinal's Cap*, its northern part will appear as steep, high, uneven land, and, as it may be readily known from any other island hereabout, it serves as a good mark for the channel between Zea and Macronisi. The island *Zea* is much higher than Macronisi, and the channel between, as already shown, (page 217,) is 7 miles wide. Should you in the night draw near this channel, you should sail close to the Island of *St. Giorgio*, from which you may shape your course through; for Macronisi being low, you may possibly run on shore upon it, before you can see it. From abreast of Zea to the Strait of Silota or Doro Passage the course and distance will be about E.N.E. [*N.E.* ½ *E.*] 6 leagues. See page 219.

On approaching from the southward and westward, when *Zea* bears N.E. by N. [*N.N.E.*] it appears small and high; but Thermia, being abreast of you, appears very long, with a valley near its north end. The channel between Zea and Thermia, if more convenient, may be taken, as it is clear, and 5 miles in breadth. The course and distance thence to the Strait of Silota, or Doro Passage, will be about N.E. ½ N. 10 leagues.

STRAIT of SILOTA or DORO PASSAGE.—This passage has already been noticed by Captain Stewart and Mr. Wood, as shown in pages 198 and 200. The channel, Mr. Wood adds, lies N.E. and S.W.; it is about six miles broad, and free from danger. To beat through, work on the Andros shore until up to the west point,* and then stretch across to the Negro-pont, and work on that shore until you can weather the island Andros.

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* Here I have found a current setting strongly to windward.—*W. W.*

The wind sometimes blows so exceedingly strong that it is almost impossible for a ship to work through without great risk of carrying away some spars. In addition to the wind there is the strong current setting from the Dardanelles to and through this passage, which current is increased or retarded according to the strength and direction of the wind. In this case ships will do better by bearing up and running along the south side of the islands Andros and Tino, taking care, however, to carry short canvas, on account of the heavy squalls coming off the high land. Keeping Tino close on board will enable them to fetch through between Tino and Myconi; then, on opening the passage, the wind will become more steady, and sail may be increased. Mr. Wood adds, I have generally found this the best plan. In summer months, ships, in order to avoid the squalls, sometimes pass to the leeward of Delos and Myconi, and haul round the *Adelphi Rocks*, lying to the eastward of Myconi. The wind here toward noon backs to the W.N.W., in which case you will weather Nicaria, and fetch *Cape Koraka* on the north side of the Gulf of Erialo Novo, or *Scala Nova*.

From Cape Guardia, the north end of Andros, to *Cape Mastico*, the south end of Scio, the bearing and distance are E. ½ S. [*E. ½ N.*] 21 leagues: to the *Kaloyeri* or Monk Rocks, E. by N. 9 leagues: to the isle Anti Psara or Ipsera, N.E. by E. ½ E. 17 leagues: and to Cape Sigri, the N.W. point of Mytilen, N.E. ½ E. 31 leagues.

SCIO.—ISLAND and STRAIT of SCIO.—The island of Scio, or Sakez Adassi, lies between the parallels of 38° 8′ and 38° 36′ N., and between the meridians of 25° 50′ and 26° 11′ E. It is separated from the coast of Anadoli by the Strait of Scio, which is seven leagues long. Scio, the principal town, is on the middle of the east coast, and is situated, according to the observations of *M. Borda*, in latitude 38° 22′ 30″. The south point of the island is *Cape Mastico*, already noticed on *pages* 199, 233, 234; at three-quarters of a mile southward from it is the islet *Venecia* or *Venitici*, a barren rock of a conical form, moderate height, and bold-to. The cape is high and rugged, and in the channel between the depth is 20 fathoms. A sand-bank is said to exist to the southward of the islet.

Mr. Galt says, "At the closing in of the day-light, 7th April, 1810, we were off the little island *Venecia*, with Scio on the left; the stupendous mountains of Asia in front, and the hills of Samos and Nicaria, blue and distant, on the right. The breeze, which had hitherto continued favorable, now checked round into the north, and so opposed our passage to the city, which is situated on the east side of the island, that it was the middle of the following day before we reached the port. The delay and opposition of the wind I did not, however, regret; for the different tacks that we were obliged to make afforded agreeable views of the coast of Chismeh and the rural scenery of Scio.

The City of Scio, from the innumerable villas, gardens, and windmills, with which it is surrounded, and the trees interspersed among the houses of the town, has the appearance of a vast village. The vessels in the harbour, the insulated lighthouses and fortresses, and the mountains behind, abrupt and lofty, render the view one of the most beautiful landscapes in the Mediterranean.

Two light-towers, based on rock, before the port, indicate to shipping the track for entering, and a jetty, which is now even with the water, forms the south side of the harbour: but whether the lights have been re-instated we have not been informed.

This island formerly belonged to the Genoese, by whom the present fortresses were constructed, and its beautiful silk manufactures established. The houses are built in the Italian style, with lofty pyramidal roofs. Except in the particular of dress, and the streets where the shops are situated, every thing about Scio has the appearance of a town in Christendom. Previous to its recent desolation, the shops were well filled, many of them with those gorgeous stuffs, of woven gold and silver, which are but rarely seen even in London. The town of Scio was one of the principal manufacturing seats of the empire; and silks, which rival in beauty and elegance the richest of France and Italy, were produced in the Sciot looms. Many of the villas in the neighbourhood of the town are large buildings, with attached pleasure grounds and beautiful gardens.

The island of Scio has been famous, from time immemorial, for the excellence of its wines. The wine is very delicate and high-flavoured; and it is the more valuable out of the island as the produce is scanty; but, chiefly, because it is apt to become putrid in the transportation: The grain crop is trifling; not more than equal to six weeks' sustenance of the inhabitants. The fruits are the finest in all the Levant; the figs are of an incredible size, and the lemons and oranges annually exported have alone been estimated at the value of

of £25,000 sterling. But the most celebrated production of Scio is the mastic gum, an article in so much esteem by the Turks that the Greeks who cultivate the shrub from which it is obtained, enjoy peculiar privileges. The mastic gardens are the most remarkable things in the island. The only fortifications are the castles of the city and the towers along the coast."

Again, in 1818, Mr. Laurent said, "All the ideas which fancy can form of an earthly paradise seem realized here: the face of the country, itself most fruitful, is cultivated with the greatest assiduity; every part presents rich vineyards, intermingled with fruit-trees. The valleys are intersected with paths, shaded by trees, spreading over the traveller's head their luxuriant branches, bending, in the season, under the weight of lemons, oranges, and pomegranates. The inhabitants seem willing to join their efforts to add to the charms of their island; by all the foreigner is welcomed, and with delight the traveller hears the peasant's salute, *kalé emera, kalé espera*, good day, good evening. All the respectable houses are built in the Genoese style, with pyramidal roofs, having before them a flight of steps, shaded beneath a trellis of grapes, whose richly hanging bunches seem the picture of abundance.

"*The town of Scio* was built by the Genoese on the site of the antient Khios. Near the town, and on the sea-shore, is seen a vast burial-ground appropriated to the Turks. From the quantity of mastic produced, the Turks know Khios by the name of *Sakes adassi*, or Mastic Island. The principal exports are fruits and cotton. Other exports are nut-galls, mastic, terebinth, different sorts of silk, tanned hides, and bleached wax candles. A principal food of the inhabitants is fruit, fresh in summer, and dried in the winter. Live cattle, beef, and vegetables, are cheap, and there are many wells in the gardens, whence water may be obtained."

A late voyager, in describing his passage from Constantinople to Alexandria, has said, "On the fourth morning, as the sun arose, we were close to the isle of Scio. Its appearance is very singular: six or eight miles from the shore is a lofty chain of barren and purple rocks, which shut out all view of the interior, and the space between these and the sea is covered with delightful gardens and verdure, which enclose the town on every side, except toward the main.

"The fine climate of this isle, the profusion of delicious fruits, the beauty of its women, and the friendly and hospitable character of the people, caused it to be preferred by travellers to any other of the Greek Islands. In the evening, when the setting sun was resting on the craggy mountains, and the rich gardens at their feet, the shores and the shaded promenades around the town were filled with the Greek population, among which were multitudes of the gay and handsome women of Scio, distinguished for their frank and agreeable manners."

The NORTH COAST of SCIO is composed of mountains of moderate height, covered with heath, and it is said that upon it are three insulated rocks and a shoal. The Strait of Scio has been surveyed by Mr. J. Wilson, a reference to whose chart will render much description superfluous. In the north part of the Strait lies the groupe called *Spalmadoré*, &c. leaving a channel both on the east and west, either of which may be taken, according to circumstances. Close to the N.E. point of Scio is a high rock, like a haystack, called *Strovole*, which is nearly a mile N.W. by W. from the west end of Spalmadoré, and the western channel is between. *Cone Head*, on Scio, is three-quarters of a mile to the southward of the Strovole Rock, and there is a ledge of rocks about it, extending outward about a cable and a half. There is also a reef extending one-quarter of a mile from the west end of Spalmadoré, in the direction of Strovole: between this reef and Strovole are 25 fathoms of water, and there are 10 fathoms close to the rocks. There is a rock above water close to the southward of Cape Spalmadoré, and south from this, about a mile, lie the *Bird Islands*, three in number, bold-to on the western side, but S. by E. a cable's length from the southernmost, lies a sunken rock. In sailing in, through this Strait or Channel, your course from abreast of Strovole will be S. by E., until you are abreast of Cone Head, and thence S. by W.

The STRAIT of SCIO, or channel between the island and the coast on the East, is sometimes rendered dangerous by the sudden gusts of wind which issue from the mountains of the island, as well as by the *Tramontana* or north wind; yet it is generally, as shown in page 201, preferred by commanders bound to Smyrna, in order to gain the advantages therein expressed.

PORT FIN.—The little harbour called PORT FIN or DELFYN is 3½ miles to the southward

southward of the Strovole Rock. It consists of three branches, sheltered in a considerable degree by the isle of St. George, which lies at the entrance, and is half a mile in length. You may pass on either side of this isle, as it lies a quarter of a mile off shore, but the best passage is the northern one: the course in is W. by S. keeping in mid-channel, or rather toward the north shore; and when you are within the second head, which forms a cove, you may anchor in from 18 to 21 fathoms of water, muddy bottom, in the part named the *Great Port*. The *Little Port* lies to the southward of this, and S.W. of St. George's Isle: it is about half a mile wide at the entrance, and near the middle, where ships anchor, there are 15 or 16 fathoms of water, bottom of mud, sheltered from all winds, with a good outlet to the N.E. The third cove is more to the eastward, and not much more than a cable's length across the entrance: it extends S.S.W., has 14 fathoms at the anchoring place, and is used by small vessels only.

CITY or TOWN of SCIO.—*The town of Scio* is built completely of stone and brick, and is much cleaner in appearance than the eye is used to see in these countries: as viewed from the Strait it has a pretty appearance, being thick with trees, and surrounded by villages and gardens of inexpressible beauty and richness, producing, as already noticed, in great profusion, lemons, oranges, olives, and every sort of fruit. The high mountains behind the town add considerably to the summer-heat, but give an admirable finish to the prospect. The town, with these villages and gardens, extends between four and five miles along the coast: it stands by the sea-side, at the foot of a hill, and before it is a mole, which may contain several ships. There is a light-tower, as already noticed, on each side of the entrance, between which you must sail, and pass the southern one at a ship's length, in order to enter the harbour. There are 11 or 12 feet of water within, and vessels generally moor with their heads to the southward, and their sterns toward the mole; or you may anchor where you please. Abreast of the harbour you will have less than two fathoms, and within ½2, ¼2.

There is good anchorage all along the shore to the northward of the harbour, at two cables' length off, in 7 and 8 fathoms. The best anchorage is with a low point, having three mills on it, S.S.W., one mile and a half from shore, in 12 fathoms. Water procured with difficulty, and wood is dear. Cattle may be had for a single ship, and good fruit in abundance.

The entrance of the harbour is protected by a round tower (the northern one) in which is always a guard. It mounts six guns, and is in decay. The port is commanded by a ruinous redoubt on the beach, one-quarter of a mile to the northward of the port. The wall is between 30 and 40 feet high. It has a dry ditch, with drawbridge over it on the land side. The plague has frequently prevailed here.

Large ships anchor in Scio Road, and the best ground is to the N.E. of the city, about one mile from the shore, with Cape St. Helena bearing S. by W., where there is from 23 to 25 fathoms of water, on blue clay ground. There is also anchorage near the mole, in from 10 to 15 fathoms, but the ground is not so good, and it is to be observed that N.E. winds hereabout blow with great violence.

Cape St. Helena, which lies two miles S. by E. ¼ E. from the mole-head, is a low rugged point, rising gradually to a round hill, upon which stands an old watch-tower. The water above it is shoal to half a mile from shore, but without this are 10 fathoms.

STRAIT of SCIO.—*Captain Stewart* describes the Strait of Scio as a continued road-stead; some places having better holding ground than others: the best place he found was between Chismeh Harbour on the East, and a small round islet to the N.W. of it; off shore, about one and a half or two miles, in from 32 to 25 fathoms, muddy bottom, with excellent holding ground. Here a fleet might lie all winter, in perhaps the securest place on the east of Scio, the Spalmadores covering it from the northward, and Cape Blanc, on the main, from the southward, which are the two worst points of wind in this part of the globe.

Under the Spalmadores is an excellent place to take shelter in during the violent northerly winds, but it is exposed to a long fetch of sea from the southward.

To enter the Channel between Scio and the main from the southward, you may pass between Scio and the westernmost islet, [Ass Isle,] or between Cape Blanc and the easternmost islet, [Horse I.,] but *not between the islets*. Off Cape St. Helena on Scio, and Cape Blanc, on the main, it is shoal a little way; care should, therefore, be observed in sailing or working in, in order to guard against that danger: the islets are bold-to.

To

To enter the Strait of Scio from the northward, you may proceed, as above noticed, either to the east or west of the Spalmadores, but there is no passage for ships of war between these isles. The passage between them and the main is broad and clear. In the western passage you must sail near Scio, giving the islands a berth on the left, but there are reefs on both sides, extending from shore, to which a berth must be given, while the depths in mid-channel between are from 25 to 20 fathoms.

The coast of Anadoli, in the neighbourhood of Scio, is likewise fertile. The shore is partly laid out in gardens, producing excellent fruit, which, when dried, forms an object of exportation from Smyrna. In summer, the breeze from the land, on this side, is, at times, hot and suffocating.

EASTERN CHANNEL, &c.—The SPALMADORE' ISLES are now called *Coniom Adassi*.—Between *Agusto*, the easternmost of these isles, and the shore of the main, the distance is 3½ miles. The depth in the middle of the channel is from 40 to 44 fathoms, and there is little less near the islands on the western side. Close on the south side of Agusto is a little green island, and at 2½ miles S.S.E. from this is a larger, named *Hippo*, or *Horse Island*, having 20 fathoms close to it. At S.W. by W. 3½ miles from the N.W. part of Hippo, and S.S.W. 4¼ miles from the southern extremity of the Green Island, lies the extremity of a ledge of rocks, stretching two miles North from the Shoal Point, which is three miles to the north of Chismeh. This ledge must always be left on your eastern side; therefore when you come round Green Island, steer S.W. by W. toward the city of Scio, making an allowance for the current, which frequently runs very rapid with the wind, until you get abreast of Shoal Point; you may then shape your course for Point St. Helena, and run out between it and *Ass Island*, which lies about 1¼ mile S.E. ½ E. from it: the shoalest water in this strait is 7 fathoms, but near Ass Island there are 10 or 11 fathoms.

Ass Island is very small; and, at the distance of half a mile *true* east from it is *Horse Island*, a little larger than the former; between them, about midway, is a shoal patch of ground. Between Horse Island and the eastern shore opposite, which is a white point, the strait is full three-quarters of a mile across, and the depth of water therein is 9 or 10 fathoms. To the eastward of the white point just mentioned is *Siemé Bay*, where there is excellent anchorage about a mile from the shore, in 10 to 12 fathoms of water, for ships bound to the southward, and waiting for a wind to go through the strait.

TCHESME' or CHISMEH.—To the north-eastward of Siemé Bay is *Chismeh Bay*, off the mouth of which, to the westward, lies a ledge of rocks; but, as some of them are above water, they may be easily discovered; they lie nearly a mile from the shore, and there is a depth of 10 or 12 fathoms close to the west side of them. Nearly a league to the northward of Chismeh lies Shoal Point, before mentioned, and to the eastward of it is the *Great Bay of Erythræ*, at the bottom of which are the ruins of the antient town of that name.

The harbour and town of *Chismeh*, (for so this place is commonly called) lies nearly opposite to Cape St. Helena on Scio. Here figs and other fruits are laden. Grapes are hereabout cut more than once a year. The coast is barren, but the interior is very fruitful, though not well cultivated. This port is open to the N.W. It has latterly been a place of some trade. The harbour is scarcely one mile broad and half a league in length. The town is small, and stands nearly at the head of it, at about eight miles S.E. by E. ½ E. from that of Scio.

At the distance of nearly a mile N.W. by W. from the south point of the entrance, are the reef and rocks above-mentioned. On entering, you may leave them on either side, being bold-to. In the southern passage, between them and the main, are 12, and northward of them are 20 to 15, fathoms. In the port the depths vary from 14 to 7 fathoms.

CAPE BIANCO or BLANCO, on the coast of Anadoli, is the S.E. point of the Strait of Scio; it lies about a mile and a half S.S.E. from Horse Island: its cliffs are white, whence it derives its name, and it is foul and rocky to two cables' length off: Eastward of it, without the entrance of the strait, is *White Bay*, on which is a small village. S.W. by S. from the village is a dangerous rock, having over it only 4 feet of water, and on which a Greek vessel was lost. This of course must be carefully avoided. Off the bay ships bound to the northward generally lie during a N.E. wind and lee current: the best anchorage here is in 10 or 12 fathoms of water, about a mile S.E. by S. or S.E. from the cape.

EGRY-LIMAN.—In latitude 38° 34′, and about two leagues to the southward of

of the cape named *Kara-bouroun*, is the long and narrow but snug harbour called *Egrylimen*, which has been visited by Captain Beaufort. This place is shaped like a dock, and is nearly a mile in length from north to south: the inner half is a shoal of mud, but in the outer are depths of 10 to 7 fathoms, mud and sand. Of this place Captain B. says, unless close in with the land, which is very high, it is not easy to discover the opening: it may perhaps be recognised by the following mark; when a small peak on the highest part of the Kara-bouroun range of mountains bears about E.S.E. [*E. by S.*] a patch of gray barren rock, with some cultivated ground in its vicinity, may be observed about one-third up the side of the mountain. This brought under the above peak, will be nearly in one with the extremity of the peninsula which forms the entrance.

PSARA or IPSERA.—The islands Psara and Anti-Psara, commonly called *Ipsera*, lie at the distance of about four leagues to the westward of Cape S. Nicolas, the N.W. end of Scio. The larger isle is rocky, and rises to a high peak *(Mt. S. Elias)* in the centre; it is generally barren, but affords a little wine. On the west is a good road, and on the south a haven, admitting eight to ten small craft. The only town is at the north end of this port, and it formerly contained between 3000 and 4000 inhabitants, all Greeks; the whole have been expatriated; but it may be presumed that the isles will not remain uninhabited. The Psarrians or Ipsariots say that, before the revolution they lived by commerce; they have since lived by courage and industry. Anti-Psara is a large barren rock, on the west of Psara. The whole cluster occupies an extent of about two leagues each way, and at a distance of 10 miles appear from the west like a mass of low brown mountains.

In the roadstead on the western side of Psara you may lie sheltered from most winds under the isle Anti-Psara, which lies before it to the westward; you may here sail in or out, either to the northward or the southward, only by taking care to avoid some rocks lying off the north side. Being in, you may anchor at pleasure, in 4 or 5 fathoms.

"*The harbour on the south side of Psara* is the small mole harbour of *St. Nicolas*, with 3 fathoms, capable of containing thirteen vessels of 200 tons, perfectly safe from all sea. Ships of war generally anchor in the bay, in from 12 to 15 fathoms, good holding ground. This is an excellent place to take shelter in when blowing strong from the northward; it is quite safe from W.N.W. to East. The other anchorage, behind a small island on the N.W. side, is fit for merchant-vessels only. Ipsara is almost a barren rock, and was formerly inhabited by some of the best seamen and shipwrights in the Archipelago."—*Wm. Wood.*

Off the S.W. end of Anti-Ipsera [Psara-poulo] is a small rock above water.

Latitude observed in the South Harbour 38° 31′ 38″, the East point of the harbour being then on with Cape St. Nicolas of Scio, bearing East; the S.W. point North; S.W. islet off Anti-Ipsera W. by N. This bay is much exposed to winds from S.E. southward to S.W. There is no danger in working, except a rock under water, which lies about half a cable's length within the S.W. point of the anchorage on the S.E. side. The shore is bold-to, having 8 and 9 fathoms alongside the rocks. On-shore winds send a great swell into the mole.

In the roadstead on the western side of Ipsera ships are sheltered from all winds excepting S.W. To enter from the N.W. steer southerly, until you bring a long islet off the harbour E.S.E.; pass close to the North end of this islet; be ready to shorten sail, and run a hawser out if the wind is to the westward. Ships lie here with an anchor in mid-channel in 4 fathoms; the other cables to the rock, with springs ready to haul on, in case of a shift of wind. When it comes to the eastward, they get under way, and shift to the west side of the islet. There are several reefs on the side of Ipsera, and this is not a proper anchorage for men-of-war. It is also said, that there is a rock, with about 10 feet over it, off the western point of the bay, about a cable's length from shore.

Observe, in proceeding for the western harbour, to steer down nearly in mid-channel, between Ipsera and Anti-Ipsera, till you are almost abreast of the port; because a little way off Ipsera, both to the northward and southward of the port, are sunken rocks. There is also one a little way from the N.W. point of Anti-Ipsera.

GULF of SMYRNA.—Kara-bouroun, or *Black Cape*, is the N.W. extremity of the promontory and mountains between the Gulf of Smyrna and the island Scio. It lies in, or about, latitude 38° 41′, longitude 26° 23′, and bears E. ¼ S. [*E. ¾ N.*], 12 leagues, from the north point to the island *Psara*, and E.N.E. ½ E., 4½ leagues, from the N.E. end of the island *Scio*.

Kanlu-

KANLU-BOUROUN, or *Iron Head*, is a similar headland, three minutes more to the eastward; this, on the respectable authority of Captain Beaufort, lies in latitude 38° 40′ 30″, longitude 26° 26′. The isle SAHIB,* forming a useful harbour of the same name, is two miles S.E. by E. [*E.S.E.*] from Kanlu-bouroun, and its summit, which is 30 fathoms in height, is (by observation) in latitude 38° 39′ 43″, longitude 26° 28′ 15″.

In PORT SAHIB water and beef, if requisite, may be obtained. The general entrance is on the East, between Sahib and a smaller isle, *Plati* or *Flat Isle*, which is near the shore on the S.E. In this entrance there is deep water and no danger; the general depths, mid-channel, being from 26 to 20 fathoms. In the harbour is tough anchoring-ground, between the isle Sahib and the main land. S.E. winds sometimes blow out of the Gulf with great fury; and at such times vessels working in may find useful shelter in this place. There is a safe, though narrow, channel between Plati and the main; in the middle of which are 6 and 4 fathoms.

There are two channels into Port Sahib, *westward* of the island; but, as they are separated by a bed of sunken rocks, they should not be attempted by a stranger, unless he has Captain Beaufort's chart of, and directions for, the harbour.

PHOGIA, [ant. *Phokæa.*]—On the eastern side of the entrance of the Gulf of Smyrna, at about three leagues E. by S. [*East*] from Sahib Island, is the harbour of PHOGIA, the *Foilleri* of the Turks, which is sheltered by a group of rocky islands. The following description of the harbour was written by Mr. Turner, in 1816:—

The port of Phogia is superb: it is spacious, has deep water, and is enclosed by low green mountains on all sides but the north, where it is protected by high mountains of rock: it is of an oval shape, about two miles in length and one in breadth. The entrance is on the south side, and about one-third of a mile in width. The town is situated on an oblong tongue of land projecting from the S.E. side of the port.

On the right of the entrance of the port, is a small Genoese castle, and out of the town is a Genoese aqueduct, which is still in use. The streets are overhung by many Genoese arches, and there are many remains round and in the town, which is still surrounded by the Genoese wall. Nothing can exceed the wretchedness of the town, which contains about 500 houses, all of stone, but very small and crowded. The streets, which are generally five feet wide, and the widest eight, are all half-filled with mud. The number of Turkish and Greek inhabitants is about equal. Oil and wine are the chief exports. The Turks here mostly gain a livelihood by boating and fishing: pursuits shared by the Greeks, who add to them that of tilling the land.

The environs of Phogia are beautiful; the bottoms of the hill enclosing the port are all covered with olive-trees, and behind the rocky mountains which shelter the town on the north are small plains abounding in vines, with a few orange-trees. Near the town is an extensive salt-pit.

To the preceding description may be added, that the outer point of the harbour, on the south, is that called *Fogia* or *Fouges Head*. The castle is to the N.E. of it, on the same side. Within the castle is a cove, with gradual soundings of 12 to 3 fathoms. This is separated, by *Windmill Point*, from a deeper cove on the west of the town, nearly half a mile in extent, with similar soundings. The harbour altogether, though small, is secure; it is about half a mile wide at the entrance, which is steep and bold on both sides. It may be readily known by two remarkable hills, forming an obtuse angle; and, on a near approach, by the castle, which is on the starboard side. You may run in about E. by N. and anchor on either shore in 13 fathoms. Water may be had, and fish, there being a fine beach for the seine. H. M. ship *Raleigh* anchored in 13 fathoms, with the castle at the entrance W. by S. and the town S.E.

SMYRNA.—The entrance of the Gulf of Smyrna, as already shown, is between Kanlu-bouroun and Fogia: the first is high bluff land; the latter lower and uneven, with trees, by which it may be readily known. The Gulf is enclosed by high mountains, with a narrow strip of land between them and the sea, all covered with olive-trees, and a few villages are scattered around. The distance from the entrance, on circuitous courses, to the city of

* *Sagleosa* and *Sapipa* of the old charts.

Smyrna,

Smyrna, is 11 leagues. The position of the British consul's flag-staff in the city, as given from a great number of observations, is, latitude 38° 25′ 36″, longitude 27° 6′ 45″: the latter from the mean of several eclipses of Jupiter's satellites, &c.*

Smyrna, the Ismyr of the Turks, and the grand emporium of Levantine commerce, possesses a large population: it is situated on a fine rich and extensive plain, bounded by high brown mountains, generally without wood on every side by the west, which faces the sea. The plain is richly cultivated and planted with vines, olive, lemon, orange, fig, mulberry, and cypress, trees, and the harbour is so enclosed by projecting capes, that nothing is seen beyond it. The streets, however, are narrow and dirty, except where they are covered, as in the bazaars. The shops are well filled, and throughout the town there is, in ordinary times, an appearance of prosperous industry. The quarter inhabited by the Frank merchants and consuls contains a number of excellent houses, with terraced roofs, which afford a pleasant promenade. Many of the resident Europeans intermarry with the Greek families; and the Smyrnote ladies, thus blending Oriental and Frank manners and customs, are considered extremely attractive; "the turbaned head bent over the harp and piano, and the Scotch and Irish melodies sung on the shores of Asia, are no common fascinations."

The Turkish burying-ground stands on the slope of a hill, facing the west, at a short distance from the town, near another, that of the Jews, and is encircled by a deep grove of cypress-trees.

The city is estimated to contain 100,000 persons, of whom more than one-half are Turks. The rest Greeks, Armenians, Jews, and Franks. In the plague of 1813 and 1814 between 50,000 and 60,000 were lost; and, according to the public papers, above 2000 houses were burnt, and 10,000 persons rendered houseless, on the 19th and 20th of September, 1825.

In the wet season, it has been known to rain in Smyrna for fifty days incessantly, and ships in the bay are often damaged by thunder-storms. The winds in the bay are very variable: it frequently happens that a *west* wind is blowing at three leagues westward from Smyrna, and an *east* wind in the port. In this case a calm usually intervenes between.

The group of Isles within the Gulf of Smyrna, off its western shore, and which occupy an extent of eleven miles, are, in general, bold-to. These isles are collectively called the *Dourlach*, or *Houlac*, or *Orlac*, Isles. They may be, perhaps, more properly called the *Vourla Isles*, from the town of that name, situate on the main, to the southward of them. Hence the *Point Houlac* of the charts would be *Point Vourla*, and the isles which appear respectively under the names of Long Island and Partridge Island would be the *Great* and *Little Vourla Isles:* the two isles next to the Little Vourla are *St. John's Isles*, and the St. John's Isle of the chart is that of *St. Demetri* or *Demetrius*, while the Round Island of the same, is that of *St. George*. We are, however, at present, under the necessity of adopting the names which we consider as improper, because they accord with the existing charts. These islets, uninhabited, abound in game and rabbits.

Long Island is the *Kiuslin* of the Turks. It is two leagues long, N. by W. and S. by E. and half a league broad: off its north end, at a short distance, lies a sunken rock; and there is another at 2½ miles within the north end, on the eastern coast of the island; all the other part of this eastern coast is bold-to.

For vessels in want of water, there is good anchorage at two miles S.S.W. from the S.W. point of Partridge Island, between St. George's or Round Island and the main.

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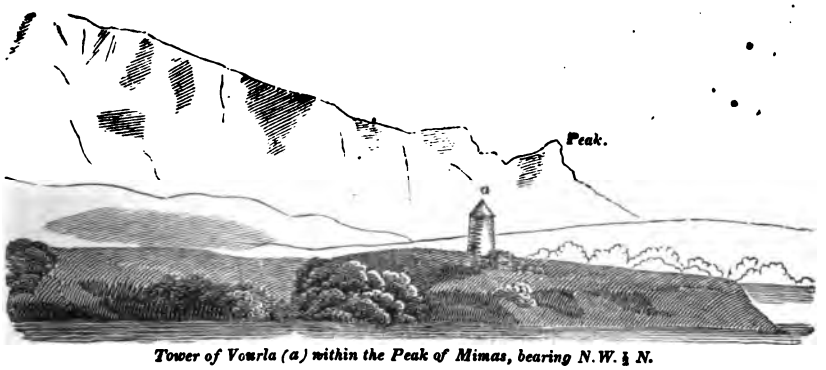
* Captain Beaufort has noticed that there is a survey of the Gulf of Smyrna, by Mr. Wilson, published at the Hydrographic Office, which would answer all the purposes of navigation, if one material error were corrected. By some unaccountable mistake, the meridian line is wrong by 16 degrees. The north peak of Kara-bouroun or Mimas bears from the Consul's house in Smyrna N. 66° 36′ W. instead of N. 82° 30′ W. as by chart. If, therefore, these two places are connected by a line on his chart, and new rhumbs are adapted to that bearing, it may be a competent guide to a stranger, if no pilot is to be had. This correction, however, applies to the gulf only, for the bearings in the *western* part of the chart, that is in the Strait of Scio, appear to be correct. The Chart is dated 11th of April, 1802, and will most likely be corrected hereafter; but the correction had not been made in 1838.

The

The marks for the anchorage are the tower (*a* in the figure annexed) just inside the Peak of Mimas, in about 7 fathoms of water.



Tower of Vourla (a) within the Peak of Mimas, bearing N.W. ½ N.

Fresh water is procured from a Turkish fountain at some distance to the left. The boats cannot approach nearer than from 40 to 50 yards from the beach, where you may fill and hoist the casks in by a triangle. This is the best watering-place in the Gulf of Smyrna, and that which the ships, in general, have preferred.

The tower *(a)*, a sort of obelisk, is whitewashed; it stands on a small peninsula, two miles to the northward of the pier or landing of Vourla, and is connected to the main by a very narrow low neck of land.

On the Eastern shore of the Gulf, to the southward of the Fogia Land, is a deep but shoal bay, *Aggria*, off which there is good anchorage in 12 fathoms. The land to the southward then becomes very low, with numerous flat isles, but little above the surface of the water, and called the *Salines*, from the quantity of salt made on them.

From Sahib Isle, already described, to the N.W. point of the Great Dourlach, or Long Island, the bearing is S.E., (by compass,) and the distance 3½ leagues. This point is a low tongue of land, and may be approached to two cables' length.

Remarks by Captain Stewart.—"The whole of this Gulf, from getting abreast of the middle of Great Dourlach, or Long Island, to the castle and harbour, is a safe anchorage, —provided you give the shoals on the northern side a sufficient berth; but the best anchorage, if you are not going so far as Smyrna, or are on a cruise, is under the Dourlach Islands. On the south side of Little Dourlach, or Partridge Island, is excellent riding with all winds, in from 15 to 17 fathoms, muddy bottom: the shores are all clear of dangers, and you may pass within half a ship's length of a low rock that lies on your larboard side in going in from the eastward. You will seldom, in sailing in, go near this rock; but it is mentioned in case you work in: the passage is also clear between Partridge and Long Island.

"*To sail up to Smyrna*, the best rule for a stranger is, to coast along the Dourlach Islands, and then steer up toward the castle of St. James, keeping well toward the south shore: so soon as you can see Smyrna town it ought to be kept open to the southward of the castle. These rules will keep you clear of the great shoal that extends all along the north side of the Gulf of Smyrna.

You will commonly find a different wind in this Gulf from that outside, even in strong gales. We have been running to look for shelter here with a hard northerly gale, and found it to come so strong out from the eastward, that we were obliged to go under the Spalmadores. Sometimes merchant-ships even cannot fetch the latter in such gales."

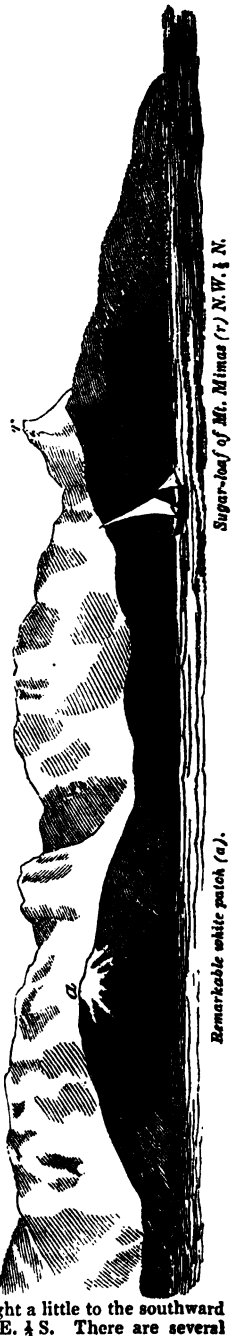
In the winter a ship off Kara-bouroun, if bound for Smyrna, should not attempt to beat against a strong wind, for she will be exposed to heavy squalls from the Gulf of Sandarli, on the N.E. Rather stand over to Mytilene and tack at day-light to the eastward, when she will stand a chance of fetching in, as the wind generally veers a little to the northward in the morning, and continues to do so until the sun souths.

In summer, on coming from the southward, let ships beware of hugging Kara-bouroun from an idea of shortening the distance; as they may lose the wind suddenly, and get into

a current which will set them toward the lee-shore. Pass a mile or two to the westward of Kara-bouroun, and then stand into mid-channel, between that and Fogia.

DIRECTIONS FOR SAILING UPWARD.—If you bring the headland Kanlu-bouroun to bear West (by compass) and three miles distant, the direct fair-way course up to *Long* or *English Island*, which lies on the south side of the Gulf, will be S.E. ½ S. 4 leagues. With this course and distance, if it can be exactly made, you will gain the depth of 27 fathoms, at two miles from the north side of Long Island.* From this spot you alter your course, and steer S.E. by E. ½ E. toward two remarkable hills on *Mount Corax*, called the *Two Brothers;* this course continued for 2½ leagues will lead you clear of all dangers on both sides, and into 28 and 29 fathoms of water. So soon as the sugar-loaf hill of *Mount Mimas* (within Kanlu-bouroun) comes within a large ship's length open to the southward of a remarkable white patch or hill near the middle of Long Island, bearing N.W. ½ N., steer with that mark S.E. ½ S. 4 miles, and you will gain about 22 fathoms of water, at a mile to the southward of the long spit formed by the stream of the Sarabat or Hermus, and extending from the north shore.† From this place you may see the castle at the entrance of the Port of Smyrna, standing on a projecting low point of beach, on the south shore, and the Old Castle of Smyrna, nearly in the same direction, upon a hill above the city. When the latter castle comes open to the southward of the former, and on with a low flat-roofed mosque, round which are a few trees, bearing E. by S., you may steer directly toward it, and will carry from 22 to 16 fathoms of water, until you get within half a league of the Castle (or St. James's) Point. Then alter your course to East, or a little more northerly, so as to pass the castle at the distance of a cable's length or more, and you will have, when abreast of it, from 9 to 6 fathoms, with soft clay ground. From this castle, which is white, to the city of Smyrna, the distance is little more than six miles. Off Smyrna castle, and northward of the burying-ground, you may anchor, at pleasure, in from 9 to 7 fathoms. On full and change days, the tide, when regular, flows from three to four o'clock, and rises two feet: but neaps are always irregular. Variation 13° W.

A vessel having arrived into the middle of the Gulf, may, if requisite, continue to steer S. by E. ½ E. toward the *Two Brothers*, on Mount Corax, until within half a mile of the south shore, and then run along shore, at that distance, nearly up to the castle on St. James's Point; but proceeding thence as already directed. Between St. James's Point and the shoal ground opposite the channel is but little more than one-third of a mile across; farther westward, between



The sugar-loaf of Mount Mimas, (*r*) bearing N.W. ½ N., should be brought a little to the southward of it; and with this mark on, you may steer over for the Brothers, S.E. ½ S. There are several other white patches on the island, but there is no fear of mistaking them. With the evening's sun they are not so distinct. On sailing out of the Bay, Mount Mimas opens of Long Island, and farther on you open another point of Long Island, which is low and white.

* *Off the North Shore of the Entrance of the Gulf*, at 2½ miles S. by E. from Fogia Head, and three-quarters of a mile from some *red cliffs*, is a ledge of rocks, with 15 fathoms close to them, which must be carefully avoided by ships working inward or outward.

† This mark has been more particularly described as follows:—*Leading Mark from Long Island to the Brothers.*— Toward the middle of Long Island, on the summit of the second hill from the N.E. end, is a remarkable white patch (*a* in the view annexed.)

the

the Long Spit and south shore, it is above two miles. As the greater part of the north shores of the Gulf is low marshy land and islands, in some parts occasionally covered with water, and consequently dangerous when working up or down, a vessel should not stand toward it into a less depth than 5 fathoms; but, on standing toward the opposite side you may be guided by your distance from Long Island, and the other islands on that side.

Remarks and Directions from Mr. Wood's Journal.—Vessels *bound for the Gulf of Smyrna*, and having rounded the N.W. point of Scio, about two miles off shore, by taking an E. ½ S. course, 30 miles, will find it to lead up abreast of the Peak of *Mimas*, within Kanlu-bouroun, called by the pilots *Kara Bornea*. This peak is very remarkable, as no other part of the land in the Gulf is like it, and under it is the small island called *Sahib* or *English Island*, near which are some windmills, and behind it the anchorage for coasters already described. The land on the western and southern sides of the Gulf is very high and free from danger. The land about Fogia is also high and remarkable, and may be readily known by a mountain gradually declining to a saddle, and having to the eastward of it a round hummock.

In advancing upward, give the N.E. point of the Great Dourlach, or Long Island, a berth of any distance you please, and steer S.S.E. ½ E. along the sides of Long and Partridge Islands, until the hills called the *Brothers*, on Mount Corax, bear S.E. by S.; then steer for them, observing that, when the Peak of Mimas comes over and on with the *white patch* on the second hillock on Long Island, bearing N.W. ½ N., as long as these marks are in one, you will clear the most projecting spit of sand on the eastern shore, and it will lead over the spit in 13 fathoms. Keep these marks on until the North end of the old castle above Smyrna town, on *Mount Pagus*, bearing E. by S., touches the south end of St. James's Castle, which stands on a low sandy point, steep-to. This mark clears the shoal on the north side of the Gulf up to the castle.

So soon as you are within a mile and a half of the castle, bring the old castle of Smyrna gradually over St. James's, until a remarkable peaked hill (between two mountains) comes on with the last square tower near *Jareed Point*, bearing E. by N. This mark will then keep you clear of the spit abreast of the castle. The channel is half a mile broad, and it shoalens suddenly from 6 fathoms. There are 10 fathoms close to the castle point.

An E. ½ S. course, six miles, will bring you to the anchorage off the town in 7 fathoms. The depths from the castle to the anchorage are from 6 to 7, 9, and 10 fathoms, soft muddy bottom.

Should the weather be so hazy that you cannot see the old castle of Smyrna, the southernmost of the three hummocks on a mountain above St. James's, called the *Three Sisters*, may be just shut in until the castle bears E. ½ S. then steer for it, which will also lead clear of the shoals.

The general depths from Long Island to the castle are from 28 to 7 fathoms, muddy bottom. With strong southerly winds, the squalls from the mountains are very sudden, and sufficiently strong to upset any small vessel, if not previously prepared by being under very reduced sail. In the winter, moor with open hawse to a N.E. wind, and in the summer months to a N.W. wind. The sea and land breezes are almost regular during the summer months; the former setting in about 10 *a. m.* and continuing until 5 *p. m.*: the sea breeze from the N.N.W., and the land-wind from N.E.

In the Bay of Smyrna, when working up from St. James's Castle to Smyrna, your tacks must be very short, and the moment the last square house at Jareed begins to come on with the peaked mountain, down anchor, or you are on shore!

As the Strait, formed by the point of St. James's Castle and the shoals on the opposite side, is more dangerous than is commonly imagined, we hereto annex some further Remarks upon it, by Mr. Robert Hall, master of H. M. Sp. *Raleigh*, as given in the '*Nautical Magazine*,' No. 28, June, 1834.

"A great proportion of the vessels attempting to work through the passage between St. James's Castle and the shoal opposite, get aground. This passage is scarcely half a mile wide, and, on examination, the extremity of the shoal was found to be composed of short spits, running off in ridges, with deep water between them. There are seven and a half fathoms without the ends of all those spits, but not more than a quarter of a cable from them. A ship, in working through, should never stand toward the shoal into less than quarter less eight, or half seven fathoms, and always keep two leads going as fast as possible.

possible. Supposing her to stand on after she had got into half seven, at the next cast of the lead she might perhaps be in the same water; yet it would be because she was between the ends of two of these spits. Having, consequently, shoal-water on each side, when her helm is put down she would shoot aground on one of them.

"On turning through this channel, the following marks are recommended, viz.:—A remarkable white house, which stands close to the water-side, on the southern side to the right of Smyrna, kept a very little open to the left of another house standing at the left end of a grove of trees, farther back in the country. Nearly in a line with it, still farther inland, is a remarkable cone-topped hill, the top of which only can be seen, the lower part being hidden by the intervening land.

"In standing over from the castle side toward the shoal, the house which stands at the left end of the grove of trees should be observed, as it closes with the white house standing at the water-side; and when it is nearly touching, (do not let them touch,) put the helm down, and you will be clear of all danger.

"The castle side is steep-to, and may be approached to half a cable.

"Another cause of many ships getting aground, (particularly in working down the gulf during the summer months,) is a current, (perhaps not suspected by strangers,) running down, and early in the mornings at the rate of full a knot per hour; but as the day advances it becomes weaker. In light winds, this current has considerable influence on a ship in working, and renders her, in staying close to the shoal, comparatively unmanageable.

"The cause of this current is evident. The strong sea-breezes which blow during the middle of the day, tend to raise the water at the head of the gulf above its usual level, and it has only the narrow channel between St. James's Castle and the shoal by which to escape."

BAY of VOURLA.—"The anchorage, known as Vourla Bay, is situate on the S.W. side of the Gulf of Smyrna, about nine leagues from Cape Calaberno, [*Kanlu Bouroun,*] within the islands of Hourlac or Dourlac, which are seven in number: namely, Long Island, Partridge Island, Goat Island, Rabbit Island, St. John's Island, Round Island, and Clazomene. There are also two small islets off the North end of St. John's Island, and two off the N.W. point of Goat Island. The passages between these islands, with respect to each other, are all good and clear; except that, between St. John's and Round Island, which is contracted to half a cable's length by a reef extending out from their two nearest points: in this channel are 7 and 10 fathoms. That between Clazomene and the main is blocked up by the remains of the antient causey. Ships coming from the westward usually pass outside Long and Partridge Islands, and having rounded the latter steer for the channel between St. John's and Rabbit Islands; and, having brought the custom-house at the bottom of Vourla Bay on between the break in a row of windmills at Vourla, steer for the former; or, which is the same thing, keep in mid-channel, and having brought the watering-place W. by N., haul a little to the westward and anchor where you please. Perhaps the best anchorage is with the bluff point of Round Island E. by N., the tower to the northward of the watering-place N.W., and the custom-house before-mentioned S. by W. in 12 fathoms: but, as this anchorage will accommodate the largest fleet in the world, you may pick up any berth you please, only be careful not to approach too near the south point of Goat Island, as a shoal, with only 18 feet on it, lies S.W. from it, about two cables off, and do not go into less than 5 fathoms in the bay to the southward of the round tower.

If desirous of passing between Long Island and the main, keep the S.W. point of Long Island open on your larboard bow; and as you approach it you will perceive a small low islet lying off it, which must not be passed nearer than half a mile. Having rounded this islet you will see Partridge Island come open; it is high and has a peak at its northern end. Open its northern end a handspike's length to the southward of the South point of Long Island, and then haul up for the centre of Partridge Island W.S.W., steering that course until Round tower Point (which at this distance makes like an island, and has a tower on it) comes on with another (high) point to the southward of it, bearing S. ½ E., or until the custom-house in the bottom of Vourla Bay, comes open of the latter; you will then be clear of the shoal which lies off the point Hourlac, half a mile, having 15 feet on it, and may steer for the custom-house, passing in mid-channel between Round-tower Point and Goat Island: do not borrow on the latter, on account of the 18 feet shoal before-mentioned; and, having brought the watering-place west or W. by N., anchor as before stated. The holding-ground is excellent, being stiff mud.

A pier

A pier has been erected by the squadron at the watering-place, which facilitates the mode of watering: the fountain is about 20 fathoms from the pier-end, and the water is filled by a common hose, raised at one end by boat's oars; or a force-pump may be applied with good effect."—GEO. PEACOCK, *Acting-master H.M. Steam vessel Medea*, 1834.

WINDS, &c. on the COAST of ANATOLI and NEIGHBOURING ISLANDS.—The remarks which follow on the prevalent winds upon these coasts, have appeared as the results of experience. These winds have been classified, in three directions, South, S.S.E. and N.E. After a N.E. wind the sky becomes clear for a few hours, when gradually it again darkens over; and, in twelve or fifteen hours, in the Gulf of Smyrna, you will probably have a gale from S.E. or S.S.E.; in the Strait of Scio from S.E.; and along the coast of the main from S.S.E. and South. It generally comes on in the evening, but sometimes at night; toward the morning it blows violently, and continues often till midnight, when it is succeeded by heavy rains; these last a few hours, and then the wind will shift to the S.W., with strong and violent gusts; after this it moderates, and becomes showery and squally, veering toward the west until it gets N.W., in which quarter it is seldom known to blow hard; it will, therefore, stop here, when, with a heavy shower of rain or hail, it turns N.N.E. or N.E.

A few hours before this change takes place, the mountain-tops are enveloped in dark and heavy clouds; though sometimes this does not take place until the above-mentioned change of the wind is effected. The *Mimas* Mountains are remarkable for this appearance; for, after the winds begin to blow, the clouds collect on their S.W. side, and resemble snow; the like appearance, with similar winds, may be seen over other high lands, both of the Mediterranean Sea and the ocean; and the beautiful effect of the South-easters of the Cape of Good Hope, in rolling the fleecy clouds up the mountain, is well known.

The Gulf of Sandarli or Chandeli, to the northward of that of Smyrna, is remarkable for these winds: they continue thus variable during the months of November, December, January, and February. In March the weather becomes mild; in May and June the sky is clear and serene; the regular *inbait* or sea-breeze, begins to set in, and is succeeded by the land-winds. Toward the latter end of June and in July, vessels are subjected, occasionally, to the Scirocco or S.E. winds. About the equinox it will rain for a day or two, accompanied with thunder; after which the weather becomes calm and serene, continuing so throughout October; but in November it again becomes variable, with frequent gales and tempests.

The preceding remarks may be advantageously compared with those of Captain Stewart and Mr. Wood, given in our preceding pages 198 to 200; and we shall again advert to this subject in a particular section at the conclusion of this work.

XIV.—*The* COASTS *of* BARBARY, TRIPOLI, &c., *from* TETUAN *to and beyond* ALEXANDRIA.

1. THE COAST of MOROCCO, from CEUTA to the BOUNDARY of ALGIER.

GEODETIC POSITIONS.	Latitude N.				Longitude W.		
Ceuta; Almina Point	35°	54′	4″	..	5°	17′	0″
Cape Negro; Round tower	35	41	30	..	5	17	30
Cape Mazari or Tetuan; tower	35	33	15	..	5	15	20
Peñon de Belis or Velez; fort	35	11	0	..	4	16	0
Peñon de Abuzema	35	16	0	..	3	46	0
Island Alboran	35	56	45	..	3	2	0
Cape Tres Forcas	35	27	55	..	2	57	40
Melilla	35	18	15	..	2	57	50
Peuch; pointed summit of a very remarkable mountain	35	3	3	..	2	35	34
Zaffarine or Zaphran Isles; summit of the middle isle	35	11	0	..	2	25	48
Cape del Agua	35	8	47	..	2	25	34
Cape Milonia; northern extremity	35	6	10	..	2	10	38

HAVING

HAVING *described in our first section, pages 6 to 9, the* AFRICAN COAST, *from Tangier to Tetuan, we shall now proceed with the coast thence* EASTWARD.

TETUAN BAY, as already shown, (page 8,) lies between Cape Negro and Cape Tetuan (pr. *Tetawan)*; these capes are nearly three leagues asunder, and on each is a watch-tower: near the middle of the Bay, at the entrance of Tetuan River, is a square castle, about 30 feet high, with a few guns mounted on it.

The ground about Cape Negro is foul, and there are several rocks above water near the cape; therefore ships from the northward, even with a westerly wind, should give it a berth of, at least, half a mile. There are several spots of foul ground in the bay, particularly to the southward, but there is good anchorage on sandy ground with the castle bearing N.W. by W. ½ W. [*W. ½ N.*] about half a league from shore, with Gibraltar appearing, near the top, on the western declivity of Ceuta. Here you will find from 15 to 17 fathoms of water. At a little farther to the northward, with the latter mark on, are 14 and 13 fathoms. There are 4 and 5 fathoms within three cables' length of the castle, but the ground is not good.

Ships lying in Tetuan Bay should weigh on the first appearance of an easterly wind, which mostly sends in a swell before it blows home; for the ground is loose, and not to be depended on, with a wind on shore. In the river the tide, on the full and change, rises 5 feet, and it is high water at 1½ h. Good water may be had near the custom-house; or to the southward, from a rivulet south-eastward of the cape, as noticed on page 8.

With the wind from N.W., West, or S.W., vessels may anchor very well in the Bay of Tetuan. On steering to the South, from Cape Negro, clean bottom may be found so soon as the city of Tetuan is in sight: this city appears white, and is about 4 miles from the coast.

Especial precautions must be taken against an *easterly wind*, in the winter season; as it sometimes comes on suddenly, with a high sea; on its first indication, therefore, vessels must, without loss of time, get under way; for, if they remain at anchor, they run the risk of being stranded, because the swell and revolving currents do not, at times, allow them to weather the *Almina* or *Ceuta Point*.

From TETUAN BAY, the coast of Marocco extends eastward, about 60 leagues, where it is bounded by the frontier of Algier, about three miles to the westward of Cape Hone. The country between is inhabited mostly by Arabs; there is no town of any consequence upon the coast, and it is equally destitute of harbours. Its western part is fruitful; its eastern, variegated and barren, bordering on desert. Twenty-five leagues of coast from Cape Tetuan eastward are comprised in the province of *Errife*, a territory which produces corn and cattle in abundance; that part of it contiguous to Tetuan produces delicious oranges; also figs, grapes, melons, apricots, plums, strawberries, apples, pears, pomegranates, citrons, lemons, limes, and the refreshing fruit of the *opuntia*, or prickly pear, called by the Arabs *Kermuse Ensarrah* or Christian fig. The only river of any consequence is the Muluwia or *Moulouyah*, in longitude 2° 16′ W., and this is a deep and impetuous stream, impassable in *Liali*, the period between the 20th of December and 30th of January inclusive, or the forty shortest days, as computed by the old style. In summer, however, it is not only fordable, but often quite dry.

The *Peñon de Belis*, by the Spaniards pronounced *Veliz* or *Velez*, is an elevated islet of rock, belonging to Spain, and surmounted by a fort. It stands at the distance of 22 leagues S.S.E. ¼ E. [*S.E. ¼ E.*] from the Almina or Ceuta Point. Here, on the coast, is *Belis de Gomaira*, a Moorish town, situated between two mountains; at the bottom of which was antiently a city called *Bedis*, supposed to have been founded by the Carthaginians. In the neighbourhood of this place are forests of excellent timber, with which the Moors, before the Spaniards obtained possession of the *Peñon*, built fishing vessels. A small bay, not far to the eastward of the Peñon, or Rock, is said to afford good shelter, on its eastern side, from East and E.N.E. winds, and on its western side from westerly winds. This bay may be easily known; the west point being round and covered with trees: the east point is about two miles distant from it.

At eight leagues to the eastward of the Peñon de Belis is the *Peñon de Albuzema*, or *Garrison Rock*, another Spanish post, before the mouth of the *Mocor* rivulet, and commanding the Moorish town *Al Buzema*: the bay here is quite exposed to northerly winds; but the ground is very good, and there is no danger of bringing home the anchors.

CAPE TRES FORCAS is the extremity of the great promontory, otherwise called

called *Cape Three Points*, above which is a watch-tower. The bearing and distance of this cape from *Ceuta* are S.E. ¾ E. [*E.S.E.* ¼ *E.*] 116 miles; and from the *Peñon de Buzema*, E. ¾ S. [*E.N.E.* ¼ *E.*] 42 miles. The ground near the cape is foul, and there are several rocks near it above the water. You may pass in at the distance of a gun-shot, but here is no anchorage.

MELILLA.—On the eastern coast of Cape Tres Forcas, at 9¾ miles southward from the extremity of the cape, are the town and fortress of *Melilla*, which have been held by the Spaniards from about the beginning of the fifteenth century. The country in the vicinity abounds with wax and honey; the latter is equal to that of Minorca, and when kept a year is nearly as hard and white as loaf-sugar. Melilla stands on an islet connected to the main by a bridge. It has a harbour for small vessels, within two moles, and a good roadstead without for larger.*

The ZAPHRAN or ZAFFARINE ISLANDS are three small isles lying 10 leagues S.E. ½ S. [*S.E. by E.* ½ *E.*] from Cape Tres Forcas, and were surveyed, many years ago, by Captain Wm. Wolseley, R.N. They cover an extent, from East to West, of a mile and a quarter only, but within them there is good shelter from northerly, easterly, and N.W. winds. On the central isle wells were dug and water found. H.M. ship *Trusty* anchored at a quarter of a mile to the west of the eastern isle, in 9 fathoms, bottom of stiff clay. The soundings generally are 6 to 10 fathoms. From the nearest point of the main, *Cape del Agua*, to the southward, the isles are half a league distant.

There are passages between these isles, but they are very narrow, and, in the middle of the entrance of the western passage, is a rock on which there is only 10 feet of water; for which reason ships should never use it. The entrance between the islands and the main, either to the eastward or westward, is very good; the soundings are regular, and shoalen gradually as you approach the main. At two cables' length from the shore you will have from 4 to 6 fathoms, and at a cable's length from the islands you will have from 9 to 12 fathoms, grass and muddy bottom. The westernmost island is the highest, and may be seen 8 or 10 leagues off; its top appears like the crown of a hat. The tide rises very little here, and seems to depend chiefly on prevalent winds. The best anchorage is off the middle island, at the distance of a cable's length, in 8 or 9 fathoms; the bottom is of stiff clay, from which an anchor will hardly ever start; the south point of the easternmost island will bear about E.S.E., and the south point of the westernmost island about W. by N. These islands lying in a deep bay, between *Cape Tres Forcas* and *Cape Guardia*, are so much out of the general track of navigation, that they are little frequented, though they afford a good retreat to ships in stormy weather. To leeward of these islands you may land in moderate weather; but, as the coast is uninhabited, barren, and rocky, neither provisions, refreshments, wood, nor water, can be procured. Fish is to be caught here in small quantities. The entrance of the *River Muluwia*, already noticed, is 8 miles to the south-eastward from these isles.

2.—COAST of ALGERIA and CONSTANTINA.

GEODETIC POSITIONS.	Latitude N.			Longitude W.		
Cape Hone; northern extremity	35°	8′	20″	1°	49′	38″
Mount Noeh *(Elevation 3050 feet)*	35	8	0	1	40	53
Cape Fegalo or Figali; summit	35	34	18	1	10	18
Habibas; greater islet	35	43	28	1	7	31
Cape Falcon; Eastern side	35	46	25	0	47	4
Mers el Kebir; Light-tower	35	44	21	0	41	3

* MELILLA is one of the four fortresses still possessed by the Spaniards on the coast of Barbary; the others being *Ceuta*, the *Penon* (or Rock) of *Belis Gomaira*, (or Velis Gomera,) and *Al Buzema*; both the latter are situated on rocky islets, in the immediate proximity of the African shore. The whole of these are called *Presidios*, in consequence of their being the places to which the *Presidarios* (persons condemned to slavery) are sent to expiate their offences, by labouring in chains on the fortifications and other government works.

Melilla, situated on a promontory, is said to contain about 8000 souls, including troops, inhabitants, and slaves. It may be considered in a state of constant siege; as the Moors in its vicinity are exceedingly savage and daring, always ready to take advantage of any person who may, for an instant, be exposed, and who, by their long muskets, may be picked off.

The supplies for Melilla are sent from Malaga; and between these places there is, nominally, a regular packet; but it has, at times, been so delayed as to reduce the whole population to distress.

GEODETIC POSITIONS, *continued.*	Latitude N.				Longitude W.		
Abuja or Aguja Rock	35°	53′	25″	..	0°	27′	46″
Cape Ferrat; small summit	35	54	20	..	0	22	3
Arzeu; flagstaff of the fort	35	51	39	..	0	16	59
					Longitude E.		
Cape Ivi; N.E. point	36	6	2	..	0	11	59
Cape Hagmiss; Marabout	36	19	6	..	0	39	32
Colombi or Palomas Islet	36	26	20	..	0	55	57
Cape Tenez or Nakkous; summit	36	32	45	..	1	22	52
Aschak or Baldock Rock	36	35	43	..	1	51	52
Zarzel or Scherchel; fort	36	36	48	..	2	12	3
Sidy Feruche; the tower	36	45	52	..	2	50	59
Algier; the light-tower	36	47	20	..	3	4	32
Cape Matifou; summit	36	48	36	..	3	15	57
Dellys; the Marabout	36	55	20	..	3	55	12
Cape Tedelas or Tedlés; summit	36	54	0	..	4	9	52
Cape Sigli; summit	36	52	0	..	4	46	7
Bougia or Bujeya; Goureya	36	46	34	..	5	4	58
Cape Cavallo; conical summit	36	46	57	..	5	34	44
Salamander Shoal	35	50	50	..	5	38	16
Jijeli or Zejelli; the mosque	36	49	54	..	5	44	45
Cape Bougaroni; north point	37	6	20	..	6	25	57
Kolah or Collo; mosque	37	0	40	..	6	32	29
Cape Ferro [*Ras Hadeed*]; islet	37	5	5	..	7	9	53
Bona; minaret of the hospital	36	53	58	..	7	46	3
Ras el Hamrah or Cape Garde; ruins	36	58	4	..	7	47	1
La Cala; the mill	36	53	55	..	8	26	22
Sorelli Shoal or reef	37	23	55	..	8	36	52
Isle Tabarca; North pt.	36	57	59	..	8	45	35
Isle Galita; Eastern peak	37	31	14	..	8	56	52

From the Mulwia eastward the coast to a great extent is in a wild state. The first projecting land is *Cape Milonia*, at seven miles E. ¼ S. [*E. by N.*] from the mouth of the river, and the next point is *Cape Hone*, at five leagues, in the same direction, from Cape Milonia. Cape Hone is not easily recognized, the land about it being very low; but the summit of *Mount Noeh* or *Tedjerah*, inland, when in sight, and bearing S.E. by compass, leads directly to it. From Cape Hone different points of land to the eastward, according to the late survey, succeed each other as follow:

	Magnetic.		*Miles.*
Cape Hone to Cape Noeh	E. ¼ N.	—	5
Cape Noeh to Cape Guardia	E. ¼ N.	—	7
Cape Guardia to the N. end of the Isle Risgoun	N.E. by E.	—	5¼
Isle Risgoun to Cape Fegalo	E.N.E. ¼ E.	—	18
Cape Fegalo to Cape Sigale	E.N.E.	—	11½
the Habibas Islets	N.E. ½ N.	—	10
Cape Sigale to Cape Lindles	E.N.E.	—	4¾
Cape Lindles to Cape Falcòn, West point	E. by N.	—	7
Cape Falcon, East point, to Mers-el-Kebir	S.E.	—	6
Mers-el-Kebir to Oran	S.E. by S.	—	2¾

Cape Guardia is distinguished by a rocky islet at a short distance to the northward of it. The islet Risgoun, at 5½ miles more to the N.E., lies off the western point of the Bay of Tremecen, and to the north of a small sandy cove into which falls the *River Tafna* or Tremecen River. This isle is high, rising to nearly 200 feet above the sea, and there is anchorage on both sides of it, in from 14 to 18 fathoms, good ground. Seven miles to the eastward of this isle is the cape *Gibel Oussa*, appearing like an insulated mountain near the sea, and which may be discerned at a great distance.

Cape Fegalo advances considerably into the sea, and is one of the most conspicuous on this coast. On its western side, one quarter of a mile distant, is an insulated rock, and there are several others at its base. The cape is very steep, and its summit appears round and elevated, in comparison with the land within it. At five miles more to the northeastward is a steep hill, near the sea, named *Mount Mesaita*, which is 1266 feet in height above the level of the sea. Here is a steep and iron-bound shore.

At

At four miles to the south-westward of Cape Sigalé the coast forms an indentation, and shows two sandy coves, divided by a small but elevated conical peninsula. The largest cove, *Madagh*, is on the S.W. and affords occasional shelter to small vessels, in 6 to 3 fathoms, but is quite open to the N.W.

At a mile and a quarter W. ¼ S. from Cape Sigalé, and a quarter of a mile from the shore, is an insulated rocky islet. Between Cape Sigalé and Cape Lindles the land appears nearly uniform and is of moderate height.

The HABEEBA, properly HABIBAS, are found to be two elevated rocky islets, six miles to the N.W. of Cape Sigalé. They are surrounded by a great number of insulated rocks, extending in an E.N.E. and W.S.W. direction. The larger isle is that to the S.W., and the rocks in that direction extend from it to the distance of a mile. Occasional shelter may be found to the S.E. of the larger isle, where the depths are from 9 to 14 fathoms, bottom of gravel, but the ground, in general, is rocky and bad.

About the Habibas, both on the coast side and in the offing, during the survey, the current was found setting to the east, at the rate of a mile in the hour.

MUSCLE ROCKS.—At a mile and a half to the N.N.E. of Cape Sigalé are three steep and low rocks, lying off the middle of a sandy bay to the eastward of the cape. They appear black, being bordered and covered with muscles.

PLANE ISLE.—Opposite to the middle of the large bay (Aguadas) formed by the coast between Cape Lindles and Cape Falcon, and at three miles to the north-eastward of the former, is the low and flat islet bearing the name of *Plane Isle*. It has three small summits of nearly equal height, is bordered with rocks, but boats occasionally find shelter between them. The islet serves as a refuge for sparrow-hawks, which nestle and breed here. The western part of the land of Cape Falcon, which is low, bears hence E.S.E. 3½ miles.

On the *eastern* part of Cape Falcon, which is at a mile and a quarter from the western point of the same, is a hummock, considerably higher than the land about it, by which it may be known. The land between forms a slender cove. From Cape Falcon to the north point of the Bay of Oran the bearing and distance are S.E. ¼ E. 5 miles; and hence to the extremity of *Mers-el-Kebir*, the distance is only half a mile.

BAY of ORAN.—On the fort of *Mers-el-Kebir*, a new lighthouse was established by the French government, in 1839. The light, varied by an eclipse every half minute, is 118 feet above the level of the sea, and may be seen nearly five leagues off. The eclipses do not appear total within the distance of about two leagues. The high land to the westward is 1040 feet in height above the level of the sea.

At the bottom of the Bay, three miles to the south-eastward of Mers-el-Kebir, is the city of ORAN.

ORAN, once large and populous, is now inconsiderable and inhabited by a few thousand persons. It stands partly on the sea shore, at the mouth of a spacious ravine, and partly on two table lands lying on either side of the ravine. The appearance of it is very pleasant; the streets wide and straight, and comparatively cheerful. The ravine divides the upper town into two portions, which is connected by a pretty stone bridge of Spanish construction. The stream is perennial, and strong enough to drive several mills. A handsomer valley than this, between two parts of a town, can hardly be imagined. On each side of the stream are terraced or sloping gardens, rich with fruits and flowers, and resounding with song-birds, among the peach, almond, and orange, trees around.

The Castle of Santa Cruz, on the summit of Mount Ramerab, is 1750 feet above the level of the sea, on the nearest top of the range of hills that sweep to Mers-el-Kebir, at which point there are equally magnific Spanish fortifications, together with the minarets of several mosques, &c.

The Spaniards resigned Oran to the Moors in 1791, after they had held it more than a hundred years, and had spent millions sterling of money to render it impregnable. But the earthquake of 1790, in one fatal night, buried thousands of the inhabitants under the ruins of their houses, and though the forts were not irreparably shaken, the Spaniards consigned Oran and its province by treaty to the Dey of Algiers.

The new Kasabah or castle, which is on the western side, has handsome ramparts, batteries commanding the sea and the town, a deep ditch with a counterscarp, and the remains of a covered way. Here are barracks for 500 infantry and 200 cavalry. In all the

courts there are fountains and jets-d'eau. (*Mr. Campbell, "Letters from the South,"* 1836.)

Merchant-vessels, in the fine season, anchor before Oran in 7, 6, and 3½, fathoms, sandy bottom: with N.E. winds they are incommoded by the swell, but the anchorage is protected from West and N.W. winds by the point of the *Fort Lamouna*, formed by land which rises thence abruptly toward the interior, and on which stand the forts of S. Gregorio and Sta. Cruz: almost inaccessible and near the sea.* The highest of these, (Sta. Cruz) which may be regarded as almost impregnable, may be seen at a great distance. The landing place is between Fort Lamouna and the city; but landing is hardly practicable during fresh winds from the N.E., even in the fine season.

Point Canastal, the N.E. point of the Bay of Oran, bears from the extremity of Mers-el-Kebir East (by comp.) seven miles. Inland, at three miles *true East* from this point, is the summit of the *Mountain of Lions* or of *St. Augustin*, which rises to the height of 2017 feet above the level of the sea.

Cape Aguja or Abuja, frequently described as Cape Ferrat, lies at the distance of seven miles N.E. ¼ E. from Point Canastel, and may be readily known by its figure and height. The coast between forms a bay, frequented only by the coasters, but there is anchorage, in 12 fathoms, sandy ground, off the foot of the Lions' Mountain, which, from its height and situation is very useful as a land-mark on making the coast.

The cape Abuja is formed by a pile of steep and barren rocks, which terminate in a pointed summit. At a mile to the eastward from its extremity, and a cable's length from shore, is a pyramidal rock, called by Europeans the *Needle*, and by the natives *Seba Pharaon*, or Thumb of Pharaoh: it is 177 feet in height; at a distance looks like a church steeple or a sail, and has several small rocks at its base. The ridge of mountainous land, trending from the cape, south-eastward, rises to the height of 2050 feet.

Cape Ferrat, (proper,) a high, steep, and rocky headland, is four miles eastward of the Needle; and *Cape Carbon* is two miles *true East* from Cape Ferrat: it is distinguished by a hummock, and several insulated rocks at its base. *From Cape Carbon* to a little islet, which marks the N.W. extremity of the Bay of Arzeu, the bearing and distance are S.S.E. ¼ E. 3½ miles: and, at less than a mile to the S.S.W. of the islet is the Fort Point of *Arzeu*, opposite to which and some magazines, half a mile more to the west, is the best anchorage, having from 4 to 2 fathoms, gradually decreasing to the shore.

Between the islet above mentioned and the Fort Point there are numerous broken rocks along shore. There is also a rock, 7 feet under water, at the distance of a cable's length E. by N. from the islet of Arzeu, which requires caution; and another, partly above water, extending to the same distance south-eastward from the Fort Point.

ARZEU.—*Arzeu*, the *Arsenaria* of the Romans, is now a small and miserable village. A few new houses have been built by the French settlers, two of which supply the military with wine and brandy. The port is frequently visited by European shipping, as a place of retreat in winter and autumn. The Bay offers excellent anchorage in all seasons for ordinary merchant-vessels, and in general for all under the size of frigates, near the shore, and large ships may anchor farther out in from 5 to 7 and 8 fathoms, bottom of sand, but are safe in fine weather only, being here exposed to the easterly and N.E. winds, which produce a great swell.

On coming in, the soundings are regular, and shoalen gradually toward the shore. The greater part of the Bay on the west is bounded by a sandy beach, with large clots of sea-weed, which may be mistaken for rocks. At the bottom of the Bay is a river, *(Habrah)* discharging itself into the sea, and which receives several tributary streams: one of them is the *Wed-el-Hamam*, or River of Baths, so called from a warm spring in the neighbourhood.

Corn in considerable quantities, with cattle, wax, and oil, are the exports from Arzeu. The country here appears fertile, and there are many trees on the coast, so that both wood and water may be obtained.

Between the Bay of Arzeu and that of Algier, a distance of about 57 leagues, the coast is, in many parts, rocky and precipitous, and generally bold-to: there being mostly soundings of 50 and 60 fathoms at a short distance from shore, and, at two leagues out

* The two forts, bearing S.W. by S., form an excellent mark for entering.

from

from 190 to 200 fathoms. The principal headlands, with their bearings, &c. from each other, are as follow:—

Magnetic Bearings, and the Distances, of the Principal Points between Arzeu and Cape Matifou, according to the late Survey.

	Magnetic.	*Miles.*
Fort Point of Arzeu to Point Missigran	E. ½ S.	— 17
Point Mostaganem or Mostagan	East	— 19
Point Schelef	E. ¾ N.	— 23
Point Schelef to Gibel Iddis or Cape Ivi	N.E. by E. ½ E.	— 5
Cape Ivi to Point Basse, or Low Point	E.N.E. ½ E.	— 8
Point Basse to Cape Hagmiss	E. by N.	— 18
Cape Hagmiss to Colombi or Palomas Isle	E. ¾ N.	— 14½
Colombi Isle to Cape Nakkous or Tenez	East	— 22
Cape Nakkous to Ras Wahryah	E.S.E. ½ E.	— 14
Ras Wahryah to Point Zarzel or Scharchel	E. by S.	— 27
Point Zarzel to Ras el Amusch or Hamous	E. ¼ S.	— 9½
Ras el Amusch to Sidy Feruche	East	— 22
Sidy Feruche to Ras Akkonadda or Acrata	E.S.E. ½ E.	— 4½
Ras Akkonadda to Point Pescada or Cape Caxine	E.S.E. ¾ E.	— 5
Point Pescada to Cape Matifou	E.S.E.	— 10

CAPE MISSIGRAN may be considered as the outer or N.E. point of the Bay of Arzeu. At 2½ miles from it, inland, eastward from the point, is the little town of Mostaganem, standing on the heights at a mile and a half from the sea, upon the borders of a ravine, at the bottom of which is a rivulet. It is defended by a fort, which is a good land-mark from the offing.

The Anchorage of Mostaganem is more to the north. The cape of the same name terminates a sandy beach which extends thence two miles to the southward.

Proceeding northward we come to the high lands and river of *Schelef* or *Chellif*. The summits, which rise to the height of 740 feet, terminate with Point Schelef, in lat. 36° 4′. The mouth of the river is a mile to the southward of this point, and a shoal bar extends from it nearly two miles to the north-westward. At about two-thirds of a mile outward a portion of it is frequently dry at low water. The Schelef is the most considerable river of Algeria, both from its length, depth, and breadth. It bisects high mountainous land, and its valley may be readily known from the offing by those approaching from the west.

The next projecting point, to the north-eastward from Point Schelef, is *Cape Ivi*, having several rocks at its base, and distinguished only by its rising from the lower land about it. The *Point Basse* (Low Point) is formed by rocks nearly even with the water.

CAPE HAGMISS, in latitude 36° 19′, lies between two rivers at the bottom of valleys, which may be plainly seen. At the mouth of the northern one is the village of *Hagmiss*, whence corn is at times exported. On the right of the second, upon the top of the cliff, is a marabout, which may be seen at a great distance. The most projecting part of the cape is a steep red cliff, which appears bright when the sun shines upon it, or from 3 *p.m.* till the evening. The other part of this coast seems dreary, being uncultivated, and destitute both of cattle and inhabitants.

The islet Colombi or Palomas (Pigeon Isle) lies half a mile off the point called *Cape Gileto*, in latitude 36° 26′. It is 85 feet high above the sea, half a mile from shore, and takes its name from the great flights of pigeons which exist upon it. Vessels of moderate draught may pass between the islet and the land in the depths of 3½ to 4½ fathoms.

CAPE NAKKOUS or Tenez is the most remarkable cape of this coast; it is formed by a great mass of steep rocks, which extend three miles from West to East. The summit of the cape is 2099 feet above the level of the sea. As the cliffs advance farther into the sea than any other point of this coast, the cape may be readily known.

The town or rather village of *Tenez* is about three miles to the S.W. of the cape, at the entrance of a river of the same name, and there are some rocks above water, near the shore; but there is shelter in the road before the town, from southerly, easterly, and E.N.E. winds, though quite exposed to all others. The best anchorage is in from 7 to 9 fathoms; with a saddle hill bearing about S.S.E.

After

After leaving Cape de Gat or the Isle Alboran, ships bound to Malta generally make Cape Nakkous. On a southerly bearing it seems shaped, with its perpendicular cliffs, something like a cock's-comb; but, on a S.E. bearing, it assumes a saddle shape. From the little isle Colombi it bears nearly East, seven leagues. At about 11 miles to the eastward of Colombi, near the water's edge, is a remarkable square yellow cliff, like a castle, which appears to be bold-to: there is a small insulated rock between it and Colombi.

Cape Nakkous or Tenes, S.E. by E. ½ E. [E. ½ S.] 5 or 6 leagues.

The country hereabout has been noted for the production of corn, and the natives for their perfidious character. The interior ridge of mountains, extending nearly *true* East and West, are of great height, in one instance 3800 feet above the sea. They are frequently covered with clouds, especially with fresh easterly winds, but which are dispersed by those from the west. In several parts near the sea the land appears well cultivated.

At the distance of 25 miles to the eastward of Cape Tenez is a black rock, about two yards above water, which is known to the coasters under the name of *Aschak*. It is nearly a mile and a half from the nearest point of the shore, and particularly dangerous after sunset to steam-vessels bound either eastward or westward. On passing at two miles without the rock you may see a white marabout which stands on the opposite cliff, and to the left of the latter is a conical hummock, which seems detached from the land, and appears like an islet. The mountains of the interior continue very high.

The rock *Aschak*, as formerly noticed, was seen by Lieut. T. Baldock, commanding H.M. steam-vessel *Firefly*, on the 22nd of August, 1832, and again on the 21st of May, 1833. The islet seemed to be a cable's length across, covered with brushwood, having a sandy beach, but no appearance of shoal water about it. At about 2½ cables on the outside of it a depth of 50 fathoms, and coral bottom, were found.

ZERZAHAL, or SCHERSCHEL, or CHERCHEL.—This port, situate in a small cove, is 17 miles to the eastward of the islet *Aschak*. It admits small vessels only. The town, supposed to be on the site of the antient *Julia*, is very old, and its buildings, mostly of stone, are almost all surrounded by trees and gardens. The point or cape is high, with flat table land for its summit, and appears, at a distance, like an island.

RAS el AMUCHE, or HAMOUS.—From the outer point of Zerzahal the course and distance to the cape *Ras el Amuche* are nearly E. by S. [*E. ¼ N.*] 10 miles. The lands which form the latter are high, in a considerable extent, and one mountain, *(Chenouah)* detached by an extensive valley from the interior mountains, rises to the height of 2780 feet; this, when seen from a distance, in an easterly direction, makes the cape appear like a peninsula. The country hereabout is inhabited, but the people are described as cruel and treacherous.

On the course above mentioned, and approaching the cape, you pass the islet *Barinchel*, lying off the most advanced point of the coast: this is a rock, 65 feet in height, with some vegetation upon it, at about a cable's length from the shore, and encircled with rocks. Ras el Amuche is frequently covered with clouds, particularly during easterly winds, which give it a gloomy aspect. During the fine season it is almost always enveloped in fog.

To the eastward of Ras el Amuche the land, declining in height, forms a bay, which affords good shelter from westerly winds, but is open to the north and east. At about eight miles to the S.E.ward of the cape, and two miles within the shore, is a hill, with an obtuse summit, upon which is a small structure in the form of a pyramid, at the height of nearly 1000 feet above the sea; this is an antient monument, called in the country *el Kuber Romeah*, (the Christian tomb,) held in great respect by the Arabs. It is an object easily recognized, in a situation well determined.* From Ras el Amuche the peninsula of Sidy

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*ms that the village *Tefessad*, to the S.E. of Ras el Amuche, is no more. A few ruins now pot.*

Feruche

Feruche bears E. ¼ N. (by compass) eight leagues. The *Ras Akkonadda* of the charts is the *Ras Acrata* of the late survey, and this point, about which are several rocks, is the western extremity of the headland of Caxine, the elevated point of which is 3½ miles more to the east.

The COVE of SIDY FERUCHE, in long. 2° 51′ E., is on the south side of the point. This place has been considered as the mercantile port of the Algerine capital; the French troops made their landing here, previous to the capture of Algier, in June, 1830. This place is protected on the north by a point of land, formed of calcareous rock, on which are a battery and a santon or Turkish convent, to which the Spaniards imparted the name *Torre Chica*, (Touretta or Little Tower.) Here the fleet anchored, and proved the roadstead to be an unexpected safe-guard to the expedition, though exposed to winds from the west to W. by N.; the bottom good holding-ground: and the ships rode safely upon their chain cables. At this port the Algerine government were wont to ship the native produce, especially cattle, for the coasts of Spain and other European ports.

The aspect of the land, in advance of the peninsula of Torre Chica, is sandy and slightly undulated; thick bushes cover the surface. In the vicinity abundance of fresh water may be obtained.

The *Ras Acrata* or *Akkonadda* is the western extremity of the headland commonly called *Cape Caxine*; at a short distance eastward of this is the *Mers el Dhabanne*, or *Port of Flies*; at three miles eastward of the latter is *Point Pescada* with its battery, about which are several steep rocks: to the south-eastward of these, at the distance of a league, is the Port of Algier.

The high land of the interior, in a line between Torre Chica and Algier, is the *Mount Boujareah* or *Abou-zaryah*, on the summit of which, at 150 metres, or 492 feet English, above the sea, is a signal-post.

ALGIER.—The BAY of ALGIER is formed by *Point Pescada* on the west, and *Cape Matafux* or *Matifou* on the east; these points bear from each other, nearly *true* East and West 10 miles distant, and the bay, from North to South, is 4½ miles deep. At the bottom of it is the *Saffaron* or *Haratch River*, and on the western side is the city of *Algier*, with its mole, forts, lighthouse, &c. The last stands upon the mole, in latitude 36° 47′ 20″, and longitude 3° 4½′ E.

It is almost superfluous to say that the city of ALGIER is a place of considerable strength: it stands like an amphitheatre, forming a triangle, near the harbour; the lines of houses, which appear one above another, are of a delicate whiteness, which produces a fine effect when viewed from the sea. The pier or mole, which is 500 paces in length, extends from the continent to a small island, on which there are a strong castle, and formidable batteries. The houses have terraced roofs, and form gardens, on which the inhabitants recline in slothful indulgence. There are six gates, but no public places nor squares of any extent; the chief public buildings are seven mosques and the palace. The harbour, formed by the mole, is small, shallow, and insecure; and its entrance is impeded by rocks. The number of inhabitants has been estimated at from 80,000 to 120,000. The citadel, which is of an octagonal form, having port-holes and embrasures in view, is erected on the most elevated ground within the walls, toward the S.W. On the west the whole city is overlooked by a range of high hills, upon which stand two forts, commanding a considerable part of the bay, but the strongest fortifications are those next the sea. There is only one spacious street; all the others are exceedingly narrow and filthy. The palace, in the centre of the city, is handsome; the front is surrounded by two galleries that are supported by marble pillars; and there are two spacious halls, in which the divan formerly assembled on every Sunday, Monday, and Wednesday. The terraced roofs of the houses are so laid that the inhabitants pass over them to visit each other; and they can go over them from one end of the town to the other; as there are ladders for ascending and descending, where they are not of equal height.

On the height to the southward of the town is the *Sultan Kalassy* or *Fort de l'Empereur*, which sweeps the Plain of Babazoune below, on the east, with the town and *Casaba*. At the back of the town are many fountains and rivulets which supply the inhabitants with excellent water, brought down through a long course of pipes and conduits.

The country in the neighbourhood is generally healthy, extremely fertile, and beautifully diversified with hills, valleys, gardens, groves, and neat villas, where the most opulent people spend their summer. These villas, as well as the houses in the city, being white and

and beautifully shaded with fruit trees and evergreens, present the most delightful prospects. The houses of the European consuls, in particular, are finely ornamented with the most beautiful trees and gardens. The soil produces not only the choicest fruits, but is very fertile in corn. The melons have an exquisite flavour; some are ripe in summer, others in winter. The stems of the vines are very large, and the bunches of grapes of a very extraordinary length.*

The degenerate character of the Algerines is, unfortunately, too well known to require notice here. The different *castes* are Turks, Moors, a mixture of both, and Jews. The *Cologlies* are descendants of Turks by female Moors or natives.

The Bay of Algier, between the port and Cape Matifou, is eight miles in breadth. Since the possession of the port by the French colonists it is said to be considerably improved; and from November, 1834, an intermittent light has been substituted for the old fixed light on the mole; the flashes, which may be seen at a distance of five leagues, disappear regularly every half minute, but the fainter light does not entirely disappear within a less distance than 2½ leagues. Elevation, 121 feet. *Variation* 19° 25′ W. August 1, 1832.

Mr. CAMPBELL, in his 'Letters from the South,' 1836, says, "The numerous villas in the vicinity of Algier, from their beauty and high position, give a magnificent appearance to this portion of the coast. The view of the city is interesting. It forms a triangle on the side of a hill, the base of which is close to the sea, while the apex is crowned by the Kasabah or citadel, which was the palace of the last Dey. The Emperor's fort, built by Charles V., commands the whole town. The terraced and square houses, which rise, seemingly condensed close behind one another, are, like the forts and city walls, all washed with lime and dazzling as snow. These objects, together with the pier and lighthouse, the batteries, lined tier over tier, with hundreds of great cannon, give an imposing aspect to the city, that seems to justify its old appellation of '*Algier the Warlike*,' but the streets are narrow and very dismal.

"By the census in 1833 the inhabitants were enumerated as 11850 Moors; 1874 negroes; 5949 Jews; 2185 French (excluding soldiers); and 1895 other foreigners. Total 23,753. Of the Turkish aristocracy not a rack is left behind. The *Kabyles* are the aborigine highlanders of the country, and they are distinguished by their superior form and figure."

The city is said to stand on the site of the *Icosium* of the Romans. Its present exports consist principally in wheat, barley, hides, wax, oil, ostrich feathers, and wool.

The Bay presents no secure anchorage in winter, for then the winds send in a heavy swell: but in the fine weather of summer, vessels may anchor as convenient at a mile or a mile and a half from shore, where the depths are from 14 to 22 or 26 fathoms, with oazy bottom. It will be prudent to use chain cables, as hempen may be injured by lost anchors. In 22 fathoms, large ships may anchor with the Light-tower bearing N.W. ¾ N.; the fort Babazoune W. ¼ S.; the fort l'Empereur W. ¼ N.; and a square house, seen over the bottom of the Bay, S.E. by E. ¼ E. The fort Babazoune is remarkable, being constructed on a rock near the sea.

There is also a good anchorage on the N.E. side of the bay, in 9, 11, and 13, fathoms, bottom of sand and oaze, where vessels may find good shelter from East and N.E. winds.

A vessel having entered the Bay, will have about 40 fathoms of water within the line of the two capes, with a bottom of black clay; the water shoalens very gradually as you sail up, to 15 and 10 fathoms near the southern shore, and there is no danger, excepting a few rocks off Cape Matifou, and they mostly show themselves: there are, also, a few

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* The following Remarks were written soon after the capture of Algier in 1830.

"The coast of Algier is not 140 leagues from Toulon and Marseille; a passage which a fleet of ships may accomplish in a week, a single merchant-vessel in three days, a ship of war in fifty hours, and a steam-vessel in less than thirty-six.

"The climate of this country, as of Barbary in general, is soft and salubrious. In July and August only is the temperature oppressively warm, and even then often moderated by northern breezes. Few diseases are peculiar to Barbary; it is rarely visited by the plague, which is not indigenous, but imported by Greek and Turkish vessels from the Levant. The substitution of enlightened quarantine regulations for the blind fatalism of the Mohammedans, would, doubtless, exclude the plague altogether; while European habits of cleanliness would banish reptiles and vermin from the houses, and the advance of agriculture and civilization would exterminate the beasts of prey in the interior, as it has destroyed the wolves of Great Britain, and the panthers and rattlesnakes of New-York and Pennsylvania."

about

about the mole-head. This bay may be easily known; the land to the eastward of Cape Matifou being covered with *sand-hills*, close to the water-side, while there are *none such to the westward* of Algier, for here it is all an iron-bound coast. Off Point Pescada lie two rocks above water, with a passage between them for small vessels. The horizon kept in sight between these rocks or islets, will lead clear of the rocks near the mole of Algier and directly to the anchorage in the bay.

Cape Matifou is fortified with a fort or castle at about half a mile southward from the pitch of the cape; this fort is of a sexagon form, having three embrazures on each side, with a ditch and drawbridge; at about a mile S.S.W. from this there is a smaller castle, with nine guns, situated on the bay side; and, at about the same distance more up the bay, on the same side, is a battery, with four embrazures in each side of it. On the south shore, at about three miles from this battery, toward the town, is a fort, mounting from six to eight guns. Between the river and the town are several batteries. The mole is defended by the Lighthouse battery, mounting three tiers of guns; the lower tier, having port-holes, and being under cover, is flanked with fortifications, cut out of the solid rock. The S.W. battery has two tiers of embrasures and guns mounted; all the northernmost tier is of very heavy metal. To the northward of the town-wall, there is a square castle, with a ditch and drawbridge, with several batteries both above and below it. All the batteries to the northward of the town are elevated about 50 or 60 feet above the surface of the sea; all those to the southward of the town are very low, and on the sandy shore. There is no landing-place here but at the mole.

If, on leaving Algier Bay, when bound to the eastward, an adverse wind should come on, you may take shelter under Cape Matifou, to the W.S.W. at about a cannon-shot from shore, in from 8 to 10 fathoms of water.

Dr. Shaw, in the relation of his Travels and Residence in Barbary and the Levant, 1738, has said, "During the space of twelve years that I attended the factory of Algier, I found the thermometer twice only contracted to the freezing point; and then the whole country, which was very unusual, was covered with snow; I never knew it rise in sultry weather, unless the winds blew from Sahara, [The Desert.] The seasons of the year insensibly fall into one another, and the great equality of the temperature of this climate appears further from this circumstance, that the barometer shows us all the revolutions of the weather in the space of one inch and $\frac{3}{10}$, or from $29\frac{1}{10}$ to $30\frac{1}{10}$ inches.

"The winds are generally from the sea; that is to say, from the West, by the North, to the East. Those from the East are common at Algier from May to September; and then the westerly winds take place, and become the most frequent. Sometimes, also, particularly about the equinoxes, we very sensibly experience that force and impetuosity which the antients have ascribed to the *Africus* or S.W. wind, here called *La-betch*.

"The winds from the West, the N.W., and the North, are attended with fair weather in summer, and with rain in winter. But the easterly winds (Levanters) no less than the southerly, are, for the most part, dry, though accompanied, in most seasons, with a thick and cloudy atmosphere.

"The barometer rises to $30\frac{3}{10}$ or $30\frac{4}{10}$ inches with a northerly wind, though it be attended with the greatest rains and tempests. But there is nothing constant or regular in easterly or westerly winds: though, for three or four months together, in the summer, whether the winds are from the one or the other quarter, the mercury stands at about 30 inches, without the least variation. With the hot southerly winds it is rarely found higher than $29\frac{2}{10}$, which is, also, the ordinary height in stormy wet weather from the west."

COAST from CAPE MATIFOU eastward.—From Cape Matifou (or Matafuz) the coast of Algier continues to be rocky and precipitous, with intervals of beach and sand; and in the interior, as already noticed, are large tracts of desert, about which various tribes may be found, wandering from one place to another, with their flocks and herds, living in tents, and changing their residence according to the state of pasturage.

On the meridian of Cape Matifou, at the distance of two miles from shore, is a rocky flat, of about five fathoms, one quarter of a mile in extent: but between it and the shore the depths are from 25 to 38 fathoms. At two miles to the south-eastward from the above, and nearly on the parallel of the cape, is a groupe of small dark-coloured rocks, named *Sandja*, which reach to a short distance from the shore. The most remarkable is about 28 feet high, above water, and at times appears like a sail.

At

At two miles true East from the Sandja is an insulated black rock, of a round form, and about fifteen feet above water. It is steep-to, and the water around it is deep.

At three miles farther to the S.E. and half a mile from shore, is another rocky groupe, named *Aguelli*, the highest parts of which are about 88 feet above water. The country boats frequently take shelter here. The space between the rocks and shore is free from danger.

According to the late survey, the magnetic bearings and distances between Cape Matifou and Cape Carbon are as follow.

Cape Matifou to Cape Bingut ..	E. ¼ S.	34 miles.
Cape Bingut to Cape Tedeles	S.E. by E. ½ E.	12
Cape Tedeles to Cape Corbelin ..	E.S.E. ¼ E.	14
Cape Corbelin to Cape Sigli	S.E. by E. ¾ E.	16
Cape Sigli to Cape Carbon	S.E. ¼ E.	17

(Variation 19° West.)

The mountain *Beni Selim*, 8 miles to the S.E. of Cape Bingut, rises, like a volcano, to the height of 2755 feet above the level of the sea; that of *Beni-Abd-Allah*, four miles south from Cape Tedeles, rises to 3018 feet; that of *Azefoun*, 5 miles to the S.W. of Cape Corbelin, to 4460 feet; and that of *Beni-Choudja*, 9 miles S. by E. from Cape Sigli, to 4137 feet. The summits of the grand range, 6 or 7 miles south-eastward of the Bay of Bougia, rise to a greater height; even to 6200 feet.

On the coast, at the distance of a mile eastward of Cape Tedeles, is a dangerous reef extending to the shore, and there is another, at 5 miles to the westward of Cape Corbelin, with rocks above water to a mile from the coast. Within Cape Carbon, on the south, is the little town of Bujeya.

The N.E. part of *Cape Carbon* is composed of a great mass of bare rocks; the summit, *Mount Goureya*, surmounted by a marabout, is 2870 feet above the level of the sea. In certain positions to the N.W. and S.E. the mount appears like a sugar-loaf, detached from the main land. The extremity of the cape is perforated by the sea, in a north and south direction, and it is hence called *Metsquob*, or the Pierced Stone.

BUJEYA or Bougia.—Mr. Campbell, in his 'Letters from the South,' says that, On the 9th of January, 1835, before day-light, we anchored off *Bougia*, and early in the morning I went ashore, as the steamer always rests here for half a day, on its way between Algier and Bona. The harbour of this place is pretty spacious; but, like every other on the Algerine coast, it is insecure. The town itself lies on the slope of a hill considerably above the level of the sea. Its few streets, for it is now a miserable place, are steep and tortuous, but not so narrow as those of Algier. Poor as it is, it commands a glorious view of land and water; and even a portion of its own ruins is picturesque. But such is the grandeur of the surrounding mountain scenery that I drop my pen in despair of giving you any conception of it. The African highlands spring up to the sight, not only with a sterner boldness than those of Britain, but they borrow colours from the sun unknown to our climate, and they are mantled in clouds of richer dye. The farthest-off summits looked, in their snow, like the turbans of gigantic Moors, whilst the nearer masses glowed in crimson and gold under the light of morning.

"Bougia is at present little better than a mass of ruins, and among its houses there are still marks of the carnage that attended its last siege, in 1833.

"The town has still two forts to defend the harbour, and a third on the summit of a mountain behind it, which is 2011 feet above the level of the sea. At present, exclusive of the French garrison, it is supposed to contain about 500 persons only. Such is the condition of a place which, between four and five centuries ago was described by Leo Africanus as follows:—'Wonderful is the architecture of its houses, its temples, colleges, and palaces. Numerous are the professors of the arts; some of them are teachers of law; others of natural philosophy.'

"The native tribes in the territory, within the distance of 40 miles of Bougia, are 35 in number, and it is estimated that their men capable of bearing arms are 15,000, mostly cavalry.

"The Algerines, for the sake of their navy, were obliged to purchase timber from the woody mountains of this province, and to be their humble customers. The products of the country

country are oil, soap, dried figs, and above all, carpenters' wood; they also manufacture spades and plough-shares."

Within Point Jijeli or Zezeli is a village of that name, on the site of the antient Igilgilis; and about half-way between it and Bujeya are the ruins of another, *Mansouriah* or *Mezuria*. The little isle MANSOURIAH, near the shore, on the S.E. side of the Bay, affords shelter for small vessels. About *Cape Cavallo*, the north-easternmost extremity of the Bay, are several dangerous rocks.

The SALAMANDER, a shoal of 13 feet water, lies with Cape Cavallo [*Ras Djemel*] bearing S.W. by W. ½ W. 4¼ miles, and Point Jijeli S.E. by E. five miles.

CAPE BOUGARONI [SEBA-ROUS or *Seven Capes*.—Under this name is comprehended a great mass of elevated land, 16 miles in extent from West to East, and the summit of which, seven miles from shore, is 3576 feet above the level of the sea. The coast here is generally bold and steep-to.

The BAY of KOLAH or KOLLO, to the S.E. of Bougaroni, affords good shelter for small vessels, with N.W. and westerly winds, and may serve with a fast on shore, before the town, with nearly all winds. The ground holds well, but N.E. winds send in a great swell.

CAPE FERRO [*Ras Hadeed,*] is formed by a mass of elevated, bare, and serrated, rocky land, bordered with rocks, above and under water. Two pitons or small peaks may be seen to the south, and appear as if insulated. The highest summit of the cape is 1574 feet above the sea. The distance from Cape Ferro to *Cape Mavera*, [*Ras el Hamra,*] the N.W. extremity of the Bay of Bona, is 29 miles, and in the interval are several rocks near shore.

BONA.—The town of Bona is situate on the western side of the bay of the same name, five miles to the southward of Ras el Hamrah or Cape Mavera [*Cap de Garde* of the French,] and between is the little harbour named *Port Genovese* or *Genois*.

BONA, as described by Mr. Campbell, is situate in a spacious bay, bounded on the west by Cape Mavera and on the east by Cape Rosa. The river Seibouze, joined toward the end of its course by the river Boojeemah, the ant. Armua, falls into the sea within this bay, as well as the *Mafrag*, a river rather less than the Seibouze, which discharges itself half-way between Bona and Cape Rosa.

The town is built at the bottom of what the French call a *mamelon*, i. e. a nipple of land, the sides of which terminate in steep rocks along the shore; the city is enclosed by walls about 60 feet in height, pretty thick, but not backed with earth, and have the shape of a rectangle slightly inclined toward the valley of the Seibouze. This wall, though weak in some parts, is still capable of a good defence against the Arabs: its total circumference is 3400 yards. The town has four gates; one leading from the east to the harbour; another, called the Arab gate, leading to Constantina, and two that face the citadel. The Kasabah, or citadel, with a wall of 700 yards in circuit, crowns a high hill to the south of the city: this wall is so high and so thick, and so backed by the natural soil, that it would be difficult to make a breach in it; it is capable of cannonading the roadstead and the mouth of the valley, and it entirely commands the town: its interior is very large, and contains a number of cisterns.

On approaching the harbour of Bona, the shore presents a great and singular rock, to which nature has given such a likeness to a lion couchant that you remark the resemblance before being told that this is called the *Lion Rock*. The ruins of the antient city are spread over a neck of land that lies between two small rivers, having their influx together into the sea. This place was visited by Sir Grenville Temple, in September, 1837, who observes that the town was destroyed in 1832, but has been rebuilt; the streets have in several instances been widened and carried in straight lines. Many good houses have been constructed, and good shops, reading rooms, coffee-houses, restaurants, and even a theatre, established. *Journal of the R. Geog. Soc.* Vol. viii. p. 39.

From the cape or western point of the Bay of Bona, the magnetic bearing and distance to *Cape Rosa* are E.S.E. 21 miles. Cape Rosa is the extremity of high land, extending thence in a true South direction, and to the height of 1082 feet. The cape itself, composed of perpendicular rocks, is 295 feet in height, and exhibiting at top a few bushes only. To the southward of the cape are two coves, wherein small vessels frequently take shelter, in order to wait for a favorable wind: but N.E. winds send in a very heavy sea.

3.—The COAST AND ISLES of TUNIS.

GEODETIC POSITIONS.	Latitude N.				Longitude E.		
Cape Negro; highest summit	37°	5′	20″	..	8°	59′	28″
Cape Serrat: [*Ras al Munshihar*]; the hillock	37	14	0	..	9	12	30
Fratelli Rocks; the largest	37	18	6	..	9	24	16
Ras al Dukara	37	18	0	..	9	30	30
Ras al Krun	37	20	0	..	9	37	0
Cape Bianco [*Ras al Abead*]	37	19	30	..	9	49	0
Bizerta; the town	37	16	0	..	9	49	20
Cape Zibeeb	37	15	45	..	10	1	30
The Cani Rocks; centre	37	20	15	..	10	4	30
Cape Farina; guard-house	37	10	0	..	10	14	0
Isle Piana or Camla; centre	37	10	20	..	10	18	0
Cape Carthage	36	52	0	..	10	19	30
Goletta; entrance	36	48	30	..	10	16	30
Tunis; the city	36	47	0	..	10	7	0
Ras Zaphran	36	50	30	..	10	35	30
Isle Zembra; centre	37	6	30	..	10	49	0
Cape Bon; North Point	37	3	0	..	11	3	0
Kalibia; South Bastion	36	48	15	..	11	8	50
Ras al Mahmur	36	24	0	..	10	53	0
Hammamet	36	20	0	..	10	42	0
Herkla	35	58	0	..	10	35	0
Al Kuriat Isles; N.E. Point	35	48	30	..	11	6	0
Mahedia, on Cape Africa	35	28	0	..	11	13	30
Burdj Kadija; tower	35	11	52	..	11	9	5
Karkenna Isles; N.E. point	34	50	0	..	11	20	0
Cabes [*Kabbs*]: town	33	54	0	..	10	3	0
Jerba; Ras Trigamus or N.E. point	33	50	30	..	11	5	0

The State of Tunis, [antient *Africa,*] the finest of the Barbary States, extends from *La Cala*, latitude 36° 52′, longitude 8° 24′ E. to the lagoon *Al Biban*, in latitude 33° 13′, longitude 11° 20′. The population of this regency is estimated at about two millions and a half: of whom 7000 may be Turks, 100,000 Jews, 7000 Christians, and the remainder Moors, Arabs, and renegades.

The climate of Tunis is one of the finest in the world, and admirably adapted for the production of most of those articles, which, for the supply of Europe, are brought from a much greater distance. The soil, through the whole state, is remarkably fine; and, with scarcely any cultivation, renders to the husbandman an astonishing return.

During the summer and autumn rain is rare. About the middle of October it is looked for; but, should it not fall till late in the year, there is reason to fear a scanty crop in the spring. Should the rain commence in October, and the wet season continue until April, the greatest abundance appears throughout every part of the country. The grain yields plentifully, and the olive crowns the hopes of the husbandman. Nature spreads over the fields her richest carpet, and the flocks rejoice in health and abundance. The husbandman, in the eastern district, reaps his hundred-fold about the end of April; in the western, his less abundant crops nearly two months later.

The contrast is great when it pleases the Almighty to shut up the windows of heaven until January. The soil then becomes arid and sterile; the seed when sown produces little; the olive becomes shrivelled and withered, and the flocks perish from want of provender. Such was the horrid picture in 1805, when thousands, both of men and other animals, died through famine. In the most interior parts of the regency rain is seldom known.

Tunis has a few good ports, but excepting that of the capital, they are little frequented. This capital stands on a gulf of the north coast, in latitude 36° 47′, and longitude 10° 7′, about 10 miles south-westward from the site of the antient Carthage. The city [antient *Tunes*]

Tunes] stands at about 6 miles to the west of the gulf which bears its name, and is separated from the sea by an extensive lake, which also receives its name from the city. It is surrounded by a miserable wall of mud and stone, with five gates, neither fitted for ornament nor for use. The population is computed at more than 100,000. The buildings in the town are of stone, but they are generally mean, and in the whole city there is scarcely a building worthy of description, the bey's palace excepted. The streets are narrow, dirty, and unpaved; the bazaars and shops are of the poorest appearance, and but indifferently stocked. The inhabitants, who crowd these miserable alleys, present the picture of poverty and oppression. At the upper end of the town stands the *Gaspa* or citadel, which was built by the Spaniards, when they had possession of this country. In the city are several colleges and schools, in which the doctors of the law and other literati are maintained.

The Port of Tunis is at the *Goletta*, or entrance from the sea into the lake. As no river nor even rivulet, runs into the lake, the evaporation is supplied by a current setting in from the sea. The Goletta is defended by two forts of considerable strength, built by the Spaniards during the reign of Charles V., and which are kept in a tolerable state of repair.

A small port has been formed at the Goletta, into which vessels may enter through a canal of stone, having, at all times, 15 feet of water.

Vessels loading or unloading at Tunis lie off in the roads, in between 5 and 7 fathoms of water, good ground, and are served by large lighters, to transport their cargoes. The lighters, named *Sandels*, drawing little water, even navigate in the lake, and bring their loads to its borders below the city. Vessels, wishing to avail themselves of the port at the Goletta, can enter on paying a due of three Spanish dollars a-day: but very few choose to lay themselves under so heavy a tax.

The lake between Tunis and the Goletta is of an oval shape, and about 20 miles in circuit. The few fish which are found in it are of a coarse quality. The birds on its surface are of the common kinds of sea-fowl, beautiful flamingoes excepted, which are numerous in all seasons.

In the year 1820 the Bey caused a *harbour-light* to be established at the Goletta. The lantern, which is 6 feet in height and 3 feet in diameter, is placed on the top of a mast, at the height of 40 feet. It is useful as a guide for preventing Port Farina from being mistaken for the Goletta, an error that has often proved fatal. A duty of two piastres is exacted from every vessel, without distinction of tonnage, that shall anchor in the road, to maintain the charges.

The Moors of Tunis, in their religion, are, perhaps, more rigid than the Mohammedans of any other country. Their mosques would be considered as profaned were they entered by any one not of their belief. It is even asserted that, for such an offence, a Christian would forfeit his life. Their temples are, however, sanctuaries where guilty moslems, of every description, are beyond the reach of the law, and may remain unmolested for any length of time. Throughout every part of the country are to be seen houses or places of prayer, which are, in general, either the dwelling-places of saints, or their tombs, called *Marabouts*: and these, like the retreats of the Roman catholic orders, are built upon the finest spots of the country. The *saints*, who inhabit these places, are idiots or insane persons, here held in respect, as favourites of the Eternal; and it is suspected that many crafty people feign madness in order to enjoy the privilege.*

Formerly all posts or public offices were filled by Turks; but, latterly, the Bey has acted on a different principle, relinquishing his power of governing to none; those about him, who have any influence, being mostly renegades or slaves.

No great degree of discernment is necessary in order to become acquainted with the character of the Moors of Tunis. They are proud, ignorant, cunning, full of deceit, avaricious, and ungrateful. In all their dealings, whether political or mercantile, they will endeavour to over-reach you; and in dealing with them, you will find it unnecessary to treat them with either friendship or delicacy, as they have no regard for either, and they look on all Christians with contempt.

The preceding character is that given by Mr. Macgill: another writer favorably says,

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* These people are noticed more particularly in the description of Tripoli hereafter.

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"The Tunisians are more affable in their manners, more friendly to strangers, and more faithful in their engagements, than the people of Algier.. The extension of commerce, the improvement of manufactures, and the friendship they have formed with European powers, have no doubt contributed to produce these happy effects. They by no means treat Christians with contempt; on the contrary, they allow them that justice which, in vain, is expected from their neighbours."

The naval strength of Tunis is very inconsiderable. There are seldom more than three or four ships of war belonging to the government, the largest of which do not carry more than forty guns; all are badly equipped, and indifferently manned for actual service: these, with about thirty galliots of inferior force, commanded by renegades, compose the whole naval force of the Bey: but other vessels (*corsairs* or *pirates*) have, at times, been fitted out by private adventurers, who allow certain perquisites to the Bey on all they capture.

The duties on anchorage, loading and unloading, &c. are excessively high: but the trade, nevertheless, is profitable.

The regency of Tunis abounds with rich materials for the philosopher and antiquarian; but, from the state of the country, and jealousy of the government, it is dangerous to travel in the interior. It is remarkable that, throughout almost the whole of the regency, the water in the springs is either salt or hot: but there are some springs of note of the purest water. The water used at Tunis is that which is collected during the winter in cisterns. With one of these every house is provided; and, the houses being flat-roofed, every drop of rain is collected. The hot springs afford baths, which are recommended as salutary in many diseases. In some springs the water is equal to boiling heat.

The black cattle about Tunis are very small. They resemble the small cows which are brought from Scotland to England; and, in the flavour of their flesh they are also very like them. The mutton of Tunis is not esteemed; the sheep are all of the broad-tailed breed, and their flesh tastes strongly of wool. The flesh of the lambs, however, is very good. Goats are also eaten by the people of the country, who are not much accustomed to make distinctions in the quality of their food. The whole of the regency abounds in game; the red-legged partridges, in particular, are abundant, but they have little flavour. Indeed, neither their game nor their fish are of a superior quality. The Barbary courser seems to have changed his place of residence. It is very rare to see, at Tunis, a horse of even ordinary figure. The mules and asses are good, and camels are in general use.

The English, by treaty, have enjoyed greater privileges in Tunis than any other nation. Upon all goods which they import into Tunis, they pay a duty of only three per cent, *ad valorem;* which will be found, by consulting the Tariff, to be trifling, as merchandise is valued at a very moderate rate. The French and all other powers pay also three per cent. duty; but the goods must be imported from their own ports, and under their own colours, otherwise they are subject to a duty of eight per cent. The English can import from whatever port they please, and under every flag, on paying only three per cent. This advantage, in former times, was little attended to, as the commerce with Great Britain was of trivial consequence; but now that the whole supply must come from Malta, it becomes of consideration, and is therefore offensive to all in the French interest at Tunis: for, it is to be recollected that, formerly, the only merchants at Tunis were of the French nation or under its protection.*

The *Fezzans* or red caps worn by all Moslems, Greeks, Armenians, and Jews, who wear the Oriental dress, was formerly a very extensive branch of Tunisine manufacture and export. Tunis alone formerly enjoyed this manufacture, but she now divides it with Marseilles, Leghorn, and other ports; though those of Tunis are still the best, being equally superior in colour, fineness, and strength. The regency is rich in articles of export; but they are not of the greatest variety. They consist in grain of different kinds, oils of various qualities, wool, hides, wax, soap, and several articles of less consideration. The wheat is excellent, and that which, in the Levant, is called Albanian or hard grain, but its exportation is, at times, prohibited. The barley is, also, good. Some of the oil is little inferior to that of Tuscany or Genoa, and is often sold as such, even in Italy. The duties capriciously fluctuate.

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* For the Tariff, (1811,) by which the duty is levied on goods imported by the British into the Regency of Tunis, see Mr. Macgill's 'Account of Tunis,' &c., pp. 111 to 118.

The

The island Jerba, in the south, is celebrated for its woollen manufactures, which are much worn by all classes of the inhabitants of Tunis. The returns which the people of Jerba take are very trivial; yet, in a small degree, they take off some of the imported articles, both colonial and manufactured.

Soap is made in the regency of Tunis to a considerable amount: besides which are the manufactures of caps, above mentioned, woollen stuffs, and Marocco leather. The manufacture of caps gives food to thousands of inhabitants, and causes a great circulation of wealth.

The woollen stuffs, which are manufactured principally at Jerba, are of a thin texture, resembling in some degree a soft serge. They are well made, from the finest wool produced in the country. All classes of Moors, who have any covering, are dressed, more or less, in this manufacture. Thousands have no other dress than a fezzan or cap, and a blanket thrown round the body and shoulders in several turns. Others have turbans and girdles of woollen; and almost all have a *bernous*, or cloak. The females have a robe of woollen gauze thrown round them, some with silk stripes; and many wear shawls, both long and square, of the same species of manufacture. This kind of woollen stuff is also used for blankets, which are soft, light, and warm. But besides the vast quantities which are used in the country in these various ways, a great portion is exported both to Europe and the Levant. The shawls are dyed of different brilliant colours, and are to be seen in every part and city of Turkey. It is impossible to give a true idea of the extent of this manufacture: thousands are employed in it, in different parts of the state.

The manufacture of Marocco leather is, also, considerable. Great quantities of dyed skins are annually exported from the country, and as almost all the Moors wear red leather slippers or boots, the consumption is great.

The imports have been woollen cloths, chiefly from France; British muslins; Irish linens, of the coarser quality: coarse German linens; serges, called Imperial serges; and druggets. Coffee of Martinique, &c. is more generally used than that of Mocha, in consequence of a law that Turks alone shall sell Mocha coffee. It is most advantageously sold in barrels of three or four cantars each. Sugar is imported in considerable quantities. Spices find a limited sale: but a large quantity of alum is required for the manufactures. Vitriol is also much used. Other imports are tin, lead, iron, raw silk, Spanish wool, (one of the most extensive and lucrative articles,) wine, cutlery, cochineal and other dyeing materials, gum-lac, vermilion, indigo, and dye-woods.

The NORTHERN COAST, &c.—From Ras el Hamra, in lat. 36° 58′, long. 7° 47′, to the little isle TABARCA, [ant. *Tabraca*], the course and distance are E.S.E. ½ E. [*E.* ½ *S.*] 41 miles: and, from *Cape Bufahal* or *Rosa*, (known by its reddish colour), E.S.E. ¾ E. [*E.* ½ *N.*] 24 miles. *Tabarca* is at a short distance from the shore, and lies off the mouth of a little river, *Wad Ezzeine*. It is a mile and a half in circumference. On its north end is a castle, with several towers and corn magazines, built by the Genoese when they had possession of the island. It was formerly frequented by vessels from Spain and Tuscany for corn, but has latterly been more noted for the coral fishery carried on in its vicinity, off Cape Bufahal, &c. and in which, taking an average of ten years, previous to 1811, about 150 boats have been annually employed, each manned by ten persons. These fishermen are generally from Sicily or from Naples, and each boat pays a certain sum for permission. What they take is either disposed of at Tunis, sold at Tabarca, or carried to Italy and France.

Within the isle a ledge of rocks extends off from the main, with two fathoms over its extremity, but the rocks may always be discerned by the breaking of the sea, especially with northerly winds. There is a road to the eastward, and another on the west side, of the island; but they are fit only for small vessels drawing 10 or 12 feet of water. There are several rocks above water, lying to the westward of the island near the main; and thence along the coast to Cape Bufahal are from 16 to 20 fathoms of water, stony ground, close to the shore: but, to the north-eastward of the island is good sandy ground, with 6 or 7 fathoms of water, not, however, without rocky spots along the shore of the main.

At 13 miles N.E. by E. ¾ E. [*N.E.* ½ *E.*] from the *Isle Tabarca* is *Cape Negro*, which is rocky, projects out to some distance, and from the N.E. appears like an island. A pyramidal rock stand at a little distance to the east of it. The coast midway between Tabarca and Cape Negro is distinguished by sand-hills. *Ras al Munshihar*, or *Cape Serrat*,

Serrat, [ant. *Cundidum*,] is 5 leagues E.N.E. ¼ E. [*N.E.* ¾ *E.*] from Cape Negro, and has several rocks about it, above and under water, which extend eastward.

The *Fratelli*, or *Brothers*, are two rocky islets lying about two miles from shore, at the distance of 10½ miles E. ¼ N. [*E.N.E.*] from *Cape Serrat*. The coast between forms an irregular concave line, and in the course between the depths are 23 and 24 fathoms, deepening outward to 45 fathoms, of water.

GALITA.—The Island *Galita*, in latitude 37° 31′, and longitude 8° 52′, lies at the distance of 27½ leagues East [*E.N.E.* ¼ *E.*] from Ras Hadeed, or Cape Ferro; 47 miles N.E. by E. [*N.E.* ¼ *N.*] from Cape Bufahal or Rosa, and 25 miles N. by E. ¼ E. [*North*] from Cape Negro. Galita is about a league in length, uninhabited, and of moderate height. Off the N.E. end are some high rocks, the *Galitona*, with a sunken rock more to the northward; and, at half a league from the S.W. end are two others, *Aguglia*. With the exception of the south side, where there is a good road, all the shore is rocky.

On coming from the northward or eastward, with the intention of anchoring in Galita Road, you must give a berth to the *Galitona*, or three rocks that lie off the N.E. point of the island: having passed them, in 9 or 10 fathoms, run along to within a cable's length of the east point, in the same depth, and proceed to the westward for the road, which is near the middle of the south coast. There are two creeks, and near the westernmost, not far from the water side, is a grey spot of land, opposite to which is the best anchorage, in 10 or 11 fathoms, on sandy ground, very near the shore. Here you may lie sheltered from N.E., North, N.W., and West, winds; but it is to be noticed that, in heavy gales from the northward, the sea runs round the island, and causes vessels lying far off to roll very deep. It is also requisite to notice that a strong northerly wind comes in heavy gusts and flaws from peaked land at the east end of the island, which renders it dangerous to carry much sail when you come in that way: under such circumstances, you may anchor near the east point, in 20 or 22 fathoms.

On coming in from the westward, you may run in between Galita and the *Aguglia* or high rocks which lie off the S.W. end, as above described; and, having passed the west point, run up to the road, and anchor as above directed. In advancing this way you must be careful to avoid the *Soretli Rocks*, exhibited in the charts by Captain *Smyth*, which lie in lat. 37° 24½′, long. 8° 36′, at 13 miles W. by S. [*S.W. by W.* ¼ *W.*] from the west end of Galita, and around which there is a great depth of water.

NORTH COAST CONTINUED.—At two leagues to the eastward of the islets called the *Fratelli*, already noticed, is a point named *Ras al Dukara*: at two leagues farther, to the north-eastward, is another, *Ras al Krun*; and, at 10 miles eastward [*E. by S.*] from the latter is *Ras al Abead* or *Cape Bianco*, with its look-out house, which mark the entrance to the Lake of Bizerta. At 10 miles S.E. by E. ¼ E. [*E.S.E.* ¼ *E.*] from the extremity of Cape Bianco, is that of *Cape Zibeeb*, (otherwise Marabout or Dragona,) and, at 4 leagues S.E. ¼ S. [*S.E. by E.* ¼ *E.*] from Cape Zibeeb is the extremity of *Cape Farina*, (otherwise Guardia,) the antient *Apollinis Promontorium*. These are the northernmost points of the continent of Africa. The coast is very rocky and irregular, with intervals of sandy shore.

BIZERTA.—The *Bay of Bizerta*, between the Capes Bianco and Zibeeb, is 4 miles deep, and on its S.W. side, upon the western bank of the river, is the town of *Bizerta*, [ant. *Hippo Zarytos*,] off which there is anchorage, at a distance from shore, in 5, 6, and 7, fathoms. The shore of the bay is composed of sandy downs; the port is good, and here the Tunisian galleys are laid up.

Two rocky islets, the *Cani* or *Dogs*, lie at the distance of 5 miles N.E. from Cape Zibeeb: they are low and dangerous, but there is a good passage between them and the shore, with a depth of 18 fathoms in mid-channel, and shoaling gradually to 5 on each side.

The Isle *Piana* or *Plane Isle*, (otherwise *Camla*,) is a low sandy isle off *Cape Farina*, from which it is two miles distant. In the channel between is a depth of 9 fathoms. Piana may generally be approached to the depth of 4 fathoms. On coming from the westward, it is requisite to keep a good look-out for the *Cani* above-mentioned; it is equally requisite to be cautious when approaching Piana; particularly in hazy weather or by night: you may safely round the latter in 12 or 10 fathoms.

The SKERKIS and KEITH'S REEF.—The great bank between the north of Africa and the island of Sicily was first explored, as already shown, (page 146,) by Captain *Smyth*: there had, however, been previously discovered, in 1802, by Captain *Durban*, in H.M.

H.M. sloop Weazle, several reefs, lying nearly in the midway between Cape Bianca and the Isle Maritimo. Of these, the first to the westward are two reefs called the *Skerkis*, occupying a space of 3¼ miles, nearly true North and South, and one in breadth. The Weazle anchored on the S.W. side of the southern reef, and her situation, as since corrected, appears to have been in lat. 37° 44′, and long. 10° 45′, at 29¼ leagues E. ¼ S. [*E. ¼ N.*] from the island Galita, and 20¼ leagues W. ¼ N. [*W.S.W. ¼ W.*] from the south end of Maritimo. The two reefs are separated by a channel, a mile in breadth, and are surrounded by a bottom of sand. On the southern one the depth expressed is 3 fathoms, but the water was found to shoalen 9 feet on the rocks. On approaching, the water was, at all times, so clear that the bottom was distinctly seen in 25 and 30 fathoms. The depth of water on the northern reef was found from 10 to 14 fathoms.

At 5 leagues E. by S. [*E. ¼ N.*] from the northern Skerki is *Keith's Reef*, which, in a *true* direction extends nearly East and West. Its extreme length is three cables, and breadth five-eighths of a cable. The east end is partly dry, and the west end has from 2½ to 4 fathoms over it; the whole of it consists of large rocks, on which, with a swell, the water breaks: but near it are from 25 to 37 fathoms. Off its east end is a sandy shoal. From the east end of the reef the south end of the Isle Maritimo bears E. ¼ S. [*E.N.E. ¼ E.*] 41 miles. About half-way between the Skerkis and Keith's Reef is a small bank of 15 fathoms, near which there are soundings of 35 to 60 fathoms, quickly deepening to the north and south.

GULF and BAY of TUNIS.—The GULF of TUNIS is, in fact, a large bay, the entrance of which is between Cape Farina and Cape Bon, a distance of 13 leagues. On the one side of this entrance is the Isle *Piana*, already described, and on the other is the Isle *Zembra*, in lat. 37° 7′, and long. 10° 49′, bearing from Piana S.E. by E. ¼ E. [*E. ¼ S.*] 8 leagues. This isle is 7 miles from *Ras al Amar*, the nearest land within Cape Bon, and there is a good passage between for vessels bound to and from the eastward, but there are an islet and some rocks, *Zembratta*, nearly in mid-channel, which must be carefully avoided, and there are other rocks near the main. The soundings over the gulf decrease from 60 to 15 fathoms.*

From the Eastern end of the Isle Piana *Cape Carthage* bears S. by W. ½ W. [*South*] 6 leagues, and at 5 miles S.S.W. from this is the *Road of Tunis*. At 4 miles within *Cape*

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* "During our progress up the Mediterranean, (says a recent voyager,) we observed, on the morning of the 30th of June, the whole surface of the sea covered with locusts, most probably driven off the coast of Africa by a strong wind. They had been but a little time in the water, judging from the perfection of their bodies; and this opinion was afterwards confirmed by our finding several alive among the rigging aloft. They exactly corresponded with the description given of the *Gryllus Migratorius* of Linnæus, or common migratory locust, which, of all the insects capable of injuring mankind, seems to possess the most dreadful powers of destruction. Legions of these animals are, from time to time, observed in various parts of the world, where the havock they commit is almost incredible: whole provinces are, in a manner, desolated by them in a few days, and the air is darkened by their numbers; nay, even when dead they are still terrible, since the putrefaction arising from their inconceivable number is such that it has been regarded as one of the probable causes of pestilence in the Eastern regions. This formidable locust is of a brownish yellow, variegated about the belly and legs with a bluish flesh colour. It is armed with jaws and furnished with feelers; its eyes are singularly dull, with perpendicular streaks of white in them, besides which it has three transparent specks in the front of its head. On all the feet the claws are double, and its hind ones are formed for leaping exactly like those of the common grasshopper.

"On the following day we had variable airs and calms throughout the whole of the morning; during which we observed the surface of the water for several leagues a-head of us to be covered with a red colour, broken into clouds in some places, and in others forming one continued stream. On a nearer approach we found it to be a mass of animal putrefaction, swimming on the surface of the sea like oil, and emitting a most disagreeable odour. In several places we could distinctly discern fragments of locusts, and on drawing up a bucket full of this filth, we found several of their bodies almost perfect underneath this surface. It occasioned such an unpleasant smell as to oblige us to throw it overboard immediately, nor were we clear of the general mass of it until midnight.

"Running with a moderate breeze all night, we were, on the next day, abreast of the uninhabited island of *Zembra*; and at noon were off *Cape Bon*, a high promontory, projecting from a low and narrow sandy isthmus, remarkable for its summit's displaying horizontal strata of white spar stone, which renders it barren and unproductive, the interstices being covered with a short brown heath."

Farina

Farina to the S.W. is *Port Farina*, the antient *Utica*, before which is a roadstead, nearly as safe and commodious as that of Tunis. Of *Utica*, which is associated with the name of Cato, no vestiges remain; and, owing to the recession of the sea and the conflux of mud, its situation cannot now be determined with precision.

The site of the famous CARTHAGE [antient *Carthago*] is within the promontory of that name, on the N.E. side of the Lake of Tunis, and at about 12 miles, by land, from Tunis. The existing ruins are nearly three miles from the sea, although Carthage extended to the very shore. The space between Cape Carthage and Tunis still exhibits immense vestiges of antiquity. The remains of the great aqueduct which supplied Carthage with water, from the distant mountains of Zawan, may be traced from the mouth of its reservoir until lost in the mountains; as may the whole of the site of Carthage by its subterraneous ruins. Such is the actual condition of a spot upon which there once existed more than 700,000 inhabitants, and which governed three hundred cities and towns in Africa!

MIRSA or MARSA, at two miles north-westward from Carthage, and nine north-eastward from Tunis, is a pleasant spot, where the Bey has two country-houses, one of which has been a costly work, built by *Hassan Bey*, surnamed the Good. From these houses are orange-gardens, reaching almost to the shore: in the gardens is a well of sweet water, esteemed the best and lightest in the kingdom; and close to this is a coffee-house. Numbers of people resort hither to drink of this natural luxury; for those alone who have lived in such a climate can justly estimate the blessing of a clear fountain. In the middle of the court is a large mulberry-tree, under the shade of which they sit and smoke; take coffee, play at chess, and inhale the comfortable sea-breeze that refreshes this charming spot.

CAPE CARTHAGE, being a high bluff point, may be readily known: from it to the Goletta, the bearing and distance are nearly S.W. 5 miles: From the Cape to *Ras Zaphran*, on the opposite side of the bay, E.S.E. ½ E. [*East*] 13 miles. These capes form the entrance of what is properly called the *Bay of Tunis*. The coast of this bay is low, and the ground good for holding, in from 10 to 4 fathoms of water: for, although the bay is exposed to the N.E. winds, they do not blow home; nor cause any great sea.*

A notice, dated Admiralty, 17th June, 1840, states that the Tunisian Government have erected a lighthouse on Cape Carthage, which will be regularly lighted every night, with a light revolving once in every three minutes.

The best anchorage in Tunis Bay is in from 5 to 6 fathoms, soft muddy bottom, with Cape Carthage bearing N.N.E. ½ E. or N.E. by N., and the Goletta castle between N.W. by W. and West. Winds that occasion the most sea here are from N.E. to E.S.E., but, as it is excellent holding-ground, it seems that a fleet or squadron might remain here in the most tempestuous weather, and block up or watch the motions of an enemy. You moor with the best bower to the eastward, and small bower to the westward. The bay is so extensive that a number of ships may lie in it, without the reach of the cannon on shore. Fresh water may be had from a reservoir within the entrance of the Goletta.

The following directions for coming in, from the eastward, were communicated by the late Mr. Wm. Smith. They were written in or about 1817.

In steering for Tunis Bay, from the eastward, make *Cape Bon*, which is high, and, in clear weather may be seen at the distance of 15 or 16 leagues. At first it appears like an island, the land being low to the southward, high at the north end, and sloping gradually to the south. After passing Cape Bon, steer N.W. by W. for the Island Zembra, which also is high, and may be passed at the distance of a mile on any side. After passing this island, steer S.W. by W. or W.S.W. for Cape Carthage, which cape is 9 leagues from Zembra, and forms the west side of the Bay of Tunis. There is no sounding to be got with the head-land until abreast of Cape Carthage. You will then have 20, 18, and 15, fathoms, and will shoalen the water gradually in standing in to the bay. The marks for anchorage are given above.

The day after the frigate's arrival, the Goletta saluted her with 21 guns, which was

* From the Bay of Tunis, on the 25th July, 1822, Captain Smyth writes to his friend, the Baron von Zach, thus: We have at present, in this bay, excessive heat. The thermometer is at 90 and 93° in the day, and 84° at night: this, connected with miasmata and the exhalations of the marshy lake between the Goletta and Tunis, envelopes us in an atmosphere quite insupportable. I am only surprised that Tunis is so healthy as it is.

returned

returned with the same number; and, on the captain's going on shore they saluted him with 12 guns, which was returned with the same number. The country people appeared to be very civil and well-disposed towards the English in general.

The CURRENT along the coast, in settled weather, sets mostly to the eastward near the north shore and across the Bay of Tunis, for which an allowance must be made when sailing in or out; particularly by night: but the current varies, and sets, at times, in even a contrary direction, according to the wind. In August, 1822, when Captain Durban surveyed the Skerkis, it was found that, during a S.E. wind, the current from off the coast, by Cape Bon, set to the N.N.W. or nearly so, at the rate of a mile and three-quarters in the hour; while, at the same time, it set from Keith's Reef toward the Skerkis, to the W. by S. See upon this subject the remarks of *Captain Smyth*, already given in page 152. For the Winds and other phænomena of this region, see pages 128, 129.

CAPE BON.—Under Cape Bon there is good anchorage, in 13½ fathoms, good holding-ground, at a mile and a half from shore, with a remarkable rocky point, two miles S.E. of Cape Bon, bearing N.N.E. ½ E. one mile and a half distant; a marabout, standing about two miles inland, from the west shore of the bay, W.S.W. ½ W., and the south point of the bay south, about three miles.

CAPE BON to the SOUTHWARD.—Captain Gauttier has given the position of the summit of Cape Bon as latitude 37° 4′ 45″, and longitude 11° 3′ 45″. Captain Smyth places the N.E. extremity in 37° 6′ and 11° 3′. A happy coincidence, which confirms its situation. The appearance of the cape has been noticed above. Cape Bon was the antient *Hermæum Promontorium;* the coast trends two leagues to the westward [*W.S.W.* ½ *W.*] from it, and there terminates in *Ras al Amar*, the antient *Mercurii Promontorium*. This portion of coast is foul, and there is, particularly, a rock at some distance without the cape last mentioned.

From Cape Bon, on the east, the coast trends nearly South [*S. by E.* ½ *E.*] 17 miles, to the *Ras al Mustapha*, which may be known by the little town of *Kalibia*, on the site of the antient *Clypea*. At 11½ leagues *true East* from the cape is the Island *Pantellaria*, a description of which, as a dependency of Sicily, has been given in pages 147, 148.

From *Ras al Mustapha* to *Ras al Mahmur* the coast trends S.W. ½ S. [*S S.W.*], 9 leagues, regular soundings along shore, and nothing remarkable on the coast. Between Ras al Mahmur and *Al Kuriat* or *Conigliera Islands*, the bearing and distance are South [*S. by E.* ½ *E.*], 12 leagues. The space between forms the *Bay of Hammamet*, over which there are regular soundings, and clean ground. At five miles westward from Ras al Mahmur is *Nabal*, antient Neapolis; and, at two leagues farther, on a projecting head, is *Hammamet*, with its little harbour. *Herkla* [ant. *Horrea Cælia*] stands in latitude 35° 59′, at 7½ leagues to the S.S.W. ½ W. [*S. by W.* ½ *W.*] from Hammamet: and *Sousa*, [ant. *Cabar Susis*,] with its castle, in 35° 48′, 4 leagues to the S. by E. [*S.S.E.* ½ *E.*] from Herkla. At 3 leagues eastward of Sousa is *Monasteer*, or *Akgdeer*, on the west side of the entrance of the Gulf of *Lempta*, the south coast of which was distinguished by the antient *Leptis Parna*.

The town of *Mahedia* or *Mahdia*, on the point called Cape Africa, is 5 leagues to the southward of the Kuriat Isles. This is supposed, by M. D'Anville, to be the site of the *Turris Hannibalis*, whence Hannibal took his departure for Asia. The coast trends 7 leagues to the southward of this point, and thence forms the Gulf of Cabes or the Lesser Syrtis, on the south side of which is the island Jerba, noticed in the general description, page 261. This bay has, with his accustomed accuracy, been surveyed by Captain Smyth, and now, therefore, may be navigated with confidence; which heretofore was not the case, as its figure was unknown. The isle *Jerba*, or *Djerbah*, was once the isle of the *Lotophagites:* and its shores are still covered with the lotos or lotus, from which it derived that name.

GULF of KABES, CABES, or KABBS.—The following Remarks on the Eastern Coast of Tunis and the Gulf of Cabes, were addressed by *Captain Smyth* to the *Baron von Zach*, 11th June, 1823. "Foul weather and rain having hindered me from quitting the vessel, I have made use of my journal to accomplish my promise."

After having reached the entrance of the Gulf of Hammamet, I was carried to MAHEDIA, a city built with great magnificence on the ruins of the antient *Adrumetum* or *Africa*, by Al-Mahedi, the fatal founder of the Fathimite dynasty.

This city is on a fine plain, which rises by degrees, and is surrounded by orchards and vineyards. It stands on a little tongue of land which advances into the sea in latitude 35° 30′ 26″, and longitude 11° 6′ 51″, and within a wall of circumvallation, reinforced by towers and bastions, and commanded by a citadel on a height. The port, named the *Cothon*, was spacious, commodious, and safe. In fact, it was the strongest, the richest, and finest maritime place in Africa, before it was blown up, by order of the emperor Charles V.* The massive rubbish that yet remains testifies the force and violence of that terrible explosion. The citadel only and one or two towers of the fortifications have escaped the otherwise total ruin: but, notwithstanding this, it is again one of the strongest places of Barbary.

The coast southward, from Cape Africa to Salakto, (about 6 miles,) is low and sandy; but, at some distance within, the land is well cultivated, and, among other articles, it produces a great quantity of indigo. From Salakto, southward, to *Cape Vada*, (a farther distance of 6 leagues,) the coast is lower. This cape is the north point of the Channel of Karkenna, and upon it is a very high tower, called *Burdj Kadija*, which may be seen 15 or 16 miles off, and which, therefore, serves as a beacon for avoiding the neighbouring shoals. The tower stands in latitude 35° 10′, longitude 11° 10′.

The coast south-westward, between *Cape Vada* and the town of *Sfakus* (12 leagues,) is of a considerable height. This coast forms the western side of a channel, of which the eastern side is formed by the Karkenna Isles. It appears of great breadth, but is, in reality, very narrow, having very extensive banks strewed with rocks. *The tide renders it still more dangerous*, as it runs here two miles and a half in an hour, and rises and falls 5 feet, or thereabout. The time of high-water, on the full and change, is at 3 h. 30 m. *p. m.*

The Karkennas are four very low and irregular islands. The westernmost is named *Zara Lakalia;* it is nearly 14 miles in circumference, and its tower stands in latitude 34° 38′ 30″, longitude 10° 56′. The central isle is of a very irregular shape: it has seven villages in the western part; and three in the eastern part, named Shagra. The two other isles are inhabited; that toward the east is called *Kousha*, and is in latitude 34° 48′ 50″, longitude 11° 19′. The inhabitants of these isles are of a livid colour, and appear very miserable. Their principal nutriment is in dates and fishes. The first are in great quantities in these isles, which are covered with the trees.

Sfakus is a large and fine town, inclosed with very high walls, with very fertile environs. It is said to take its name from the great quantity of *sfakous*, or cucumbers, produced in the neighbourhood. The inhabitants have a great trade in grain, oil, wool, soap, dates, &c. Here is excellent anchorage for ships. The head of the mole is in latitude 34° 43′ 56″, longitude 10° 39′ 50″.

From Sfakus, south-westward, as far as *Niktar*, *Maharas*, and *Ungha*, (nearly 10 leagues,) the land rises considerably toward a chain of mountains called *Jibbel Tielth*. The coast does not afford any striking object between this part and the isles of *Surkenis*, (more to the southward,) of which the greatest is in lat. 34° 20′ 5″, and long. 10° 7′ 55″. The ruins in the south of this isle are in 34° 17′ 15″ N. and 10° 6′ E.

The coast between the Surkenis Isles and town of Kabes, and thence to Jerba, is crowned by the mountains of *Tafalamah*, *Jibbel Lccal*, and *Jibbel Tasharra*. All this coast is very safe, for we could freely approach by the lead, having 7 and 8 fathoms at three-quarters of a mile off, except when advancing to the adjacent part of the Surkenis Isles, and to the N.W. coast of Jerba, where the water is shoal.

The town of Kabes or Cabes is situated on very low land, but well cultivated at the foot of the mountains *Jibbel Hamarra:* it is surrounded by several villages, and stands on the south bank of a river of fresh water, having the village *Jarea* to the north. This space forms a small port, from which they export dates and henna.† The streets are regular, but very dirty. The castle is a sort of square redoubt, with nine guns, and well built. It stands in 33° 53′ N. and 10° 4′ 16″ E. The natives of the country hereabout

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* In 1550, the celebrated Andrea Doria took the town from the famous pirate *Dragut*, who made the governors of Italy tremble; and in the following year, being considered untenable, it was destroyed by order of Charles V. and abandoned.

† *Henna* or *Henné*, is a polypetalous plant which the Eastern females use for staining their eyelids, hands, and feet, of a yellow colour. They employ it also in dyeing silk, cotton, wool, &c.

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are at perpetual war with one another. I was obligated to give orders to fire on the parties which approached us.

From Kabes to the villages of *Zarra* and *Kataunah* or *Catana* the coast is again low, as far as *Jerba*, which is an island very populous, well cultivated, and very rich. This forms the S.E. side of the Gulf.

4.—COAST AND STATE OF TRIPOLI.

GEODETIC POSITIONS.	Latitude N.			Longitude W.		
Zoara; marabout	32°	54′	46″	11°	44′	37″
Old Tripoli; fort in ruins	32	48	51	12	25	29
TRIPOLI; the Pasha's Castle	32	53	56	13	10	58
Tajoura; the Point	32	54	0	13	21	0
Ras al Sciarra	32	47	45	18	48	0
Ras al Hamra; ruins of baths	32	46	27	13	53	30
Sidy or Seedy Abdellata; ruins	32	43	0	14	0	30
Lebida (ant. *Leptis Magna*)	32	39	30	14	14	0
Marsa Ugrah; Rock of Cyniphus	32	33	0	14	22	0
Marsa Zleetun; marabout	32	30	0	14	33	0
Ras al Houd; long rock	32	27	0	14	48	0
Marsa Zoraig; the wells	32	26	41	14	51	15
Marsa Titalita; outer rock	32	26	0	15	4	20
Cape Mesurata; great point	32	25	20	15	9	57
Kharra; Date-tree point	32	9	59	15	25	0
Melhafa; on the beach	31	58	56	15	27	55
Isa; ruins of Djebba	31	33	0	15	35	46
Djerid; on the beach	31	23	50	15	52	10
Ziraffe: point on the shore	31	14	0	16	22	46
Zaphran; ruins	31	13	0	16	40	0
Shwaisha; Marabout	31	9	42	17	10	0
Medina Sultan	31	8	25	17	15	0
Nakeim; the wells	31	4	30	17	27	0
Boosaida or Boosheida; ruins	31	0	0	17	40	0
Ras al Omjah, or Cape Licontah	30	56	0	17	58	30
Kudia; surveyor's tents	30	44	13	18	17	50
Linoofe	30	23	51	18	43	56
Bushaifa; islet	30	18	0	19	11	30
Braijea or Braiga; sand-hills	30	24	30	19	39	30
Ayn, Aigan	33	33	57	19	51	30
Gharra; isle	30	47	20	19	57	24
Ras Sahan or Sarhan	31	2	44	20	12	0
Karhora; point of the rock	31	28	20	20	0	10
BENGAZI; castle	32	6	50	20	2	56
Teukera; ruins	32	32	20	20	33	44
Ptolometa; old tower	32	42	29	20	54	50
Cape Rasat *(Ras Sem)*	32	55	56	21	38	54
Cyrène, now Grenna; little theatre	32	49	38	21	48	30
Derna; town	32	46	0	22	40	44
Cape Razatin	32	36	0	23	10	0
Gulf of Bomba; Bhurda isle	32	22	36	23	16	23
Al Kurrat	32	15	0	23	41	0
Port Toubrouk	32	3	51	24	3	33

The state or regency of Tripoli is of great extent, and terminates eastward near the meridian of 24½°. Extensive as this territory is, it is not supposed to contain more than two millions of inhabitants, the greater part being desert.

Of the coast very little was accurately known, until it was explored by Captain *Smyth*, whose recent and important survey has imparted the only view of it free from the most extraordinary errors.

The only place of trade upon the coast, of real importance, is the city of *Tripoli*, situate in

in latitude 32° 54′, and longitude 13° 11′ E. *Bengasi*, in 32° 7′ N., and 20° 2′ E. is, also, a place of some trade.* Most of the inhabitants of the maritime part have lived, as is well known, upon commerce and piracy, and many of the inland on plunder and robbery; latterly restricted to narrower limits than formerly, but still not free from the charge. The villages of the country are mostly very poor and thinly inhabited. Of the antient cities all are gone to ruin, or inhabited only by a few fishermen, lime-burners, pot-ash makers, &c., mostly in the lowest degree of misery and wretchedness.

The city of TRIPOLI, the *Tarabolus* or *Tarables* of the natives, is situated on the sea-shore. The inhabitants consist of Moors, Turks, and Jews, and amount to about 15,000. Here European renegades are advanced to offices, and may obtain the highest rank. The town contains six mosques, and is said to possess twenty or thirty armed vessels. Here is a *café* or coffee-house for the merchants, and two others for the inferior order of people; besides which are several taverns where wine and liquors are sold. The market is well supplied, and provisions are cheap: the bread and meat are excellent. The Jews have three synagogues. The merchants here correspond with Marseille, Venice, Trieste, and Malta. Tripoli is well walled, and protected by batteries mounting 115 pieces of heavy cannon, and defended by a numerous garrison of Turks, Moors, and Arabs. In front of the town is a long range of rocks and shoals, extending thence E.N.E. ½ E. [*N.E. by E.*] more than a mile and a half from the N.E. angle of the city, and which form the harbour. Here, on the 3rd of August, 1804, twenty-two Tripolitan gun-boats and other armed vessels defended the place against the American squadron, under Commodore Preble, by forming a strong line of defence at secured moorings within the reef.

The harbour of Tripoli is very commodious for small vessels. For a capital, the town is small; the houses are generally dirty and mean; the streets irregular, narrow, and filthy: but it is a place of considerable trade in corn, oil, wool, ostrich feathers, dates, skins, saffron, senna, &c. There are very fine Arabian horses here, and good cattle, but they are small. There are, also, some good sheep, and abundance of fine fish, particularly mullet. The land in the vicinity is very loose and sandy, rather barren than otherwise, and destitute of rivers and springs; so that the only fresh water obtainable, as at Tunis, is that which is preserved in the rainy season. The coast presents a long line of palm and date trees. The caroube or locust tree is, also, plentiful here. Game, of all descriptions, abound.

Captain Lyon, R.N., in the relation of his Travels in Northern Africa, 1819, has given some remarks on Tripoli, from which the following are extracted. There are here, he says, two great markets held weekly, one on the sands behind the town every Tuesday, and the other on Fridays, about 4 miles off, amongst the gardens of the *Meshia*, which form a stripe of 3 or 4 miles in breadth, between the beach and the desert. In the town are bazaars, which are open every day. There are streets covered-in overhead. The shops are ranged on each side, and are very small. Slaves and goods are carried about, before the traders, by auctioneers, who keep up a continual din, each calling the price last bidden. The Jews have a quarter of the town expressly to themselves, where they have their shops, and in which they are shut up every evening at sun-set. This place is called *Zanga t'el Yahood*. These people are much persecuted, yet they contrive to engross all the trade and places of profit. They are forbidden to use gaudy clothes, and are allowed turbans of blue only; a colour not used in the turbans of the Mohammedans.

Several houses, set apart for the reception of merchants and their goods, are called *Fondook*, and answer to the description of the Caravanseras or Khans of the East. There are a few schools at which reading and writing, though to no great extent, are taught in a very noisy manner. A knowledge of letters, however, is by no means necessary to constitute a great man, or to advance him to any post of trust. The public baths are similar to those in the eastern countries, but not so elegant.

Drunkenness is more common in Tripoli than even in most towns in England. There are public wine houses, at the doors of which the Moors sit and drink without any scruple; and the *Saldanah*, or place of the guard, is seldom without a few drunkards. The greater part of the better sort of people also drink very hard; but their favorite beverage is *rosolia*, an Italian cordial, and it is not uncommon for visitors, when making calls, to give

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* By an official communication to the British consul, the only ports of trade, from the 1st of September, 1835, are declared to be *Tripoli*, *Bengasi*, and *Derna*.

unequivocal

unequivocal hints that a little rum would be well received. Prostitutes are in large numbers, and are obliged (if known to be such) to live in a particular part of the town, called *Zanga t'el Ghaab*, or quarter of the prostitutes, under a superintendent appointed expressly for that purpose.*

A kind of vitiated Italian is generally spoken by the inhabitants of the town; so that Christians have not much difficulty in transacting business. The coin current here has only 14 per cent. of silver in it, and is daily decreasing in value. Near the sea-gate are the remains of a fine square Roman building, which now has its arches filled up, and is used as a store-house.†

SAILING DIRECTIONS.—Tripoli bears South [*S. by E. ½ E.*] 55 leagues, from the Isle *Lampion*, described in page 167, and S.W. ¾ S. [*S. by W. ¾ W.*] 63 leagues from the S.W. end of Malta, described in page 164.

The town, standing on low ground upon the shore, may be known by the trees that stand on, and extend along, the coast to the eastward of it. It is very difficult to distinguish the points of coast in the vicinity, unless you fall in directly with the town. There is a double land; which makes, when you are at 3 leagues from the shore, like a head-land, or cape, but lies far up in the country. With this land S.W. ½ S. [*S.S.W.*] at the above distance from shore, Tripoli will bear W.S.W. ½ W. 6 leagues distant. All the low land of this country is white and sandy. There are some other hills, making in a similar form, but they are farther inland, and, when bearing S.S.W. ½ W. [*S. by W.*] the town will bear S. by W. ½ W. [*South,*] and the land to the eastward S. ½ W. [*S. by E.*]

The best anchorage in the Outer Road of Tripoli is with the westernmost minaret (or steeple) in the town bearing S. by W. ½ W. [*South*] in 16 fathoms: the eastern part of the bay will then bear S.E. by E. [*E.S.E. ½ E.*] and the round castle on the east side of the bay will be in one with the second rock, and will bear S. by E. ½ E. [*S.E. by S.*]

The opening into the Harbour is between reefs on either side, at nearly two miles E.N.E. ½ E. from the N.E. angle of

Sketch of the City of Tripoli, as it appears from the Outer Road.

* Captain Lyon says, "that the *Marabouts* (a people noticed on page 259,) are the most extraordinary characters of Tripoli: they are a set of people much spoken of in all Moslem countries; but the requisites to constitute one of these saints do not appear to be every where the same. In the interior they consist in keeping up the outward show of sanctity, in abstaining from proscribed liquors, in avoiding improper or profane expressions, in being faithful to the limited number of wives, (namely four,) and in not intriguing with the wives of other men; whilst in Tripoli such forbearance is not considered necessary. The Marabouts there are of two classes: idiots, who are allowed to say and do whatever they please, and men possessed of their senses, who, by juggling and performing many bold and disgusting tricks, establish to themselves the exclusive right of being the greatest rogues and nuisances to be met with. There are mosques in which these people assemble every Friday afternoon, and where they eat snakes, scorpions, &c. affecting to be inspired, and committing the greatest extravagancies." These people have an annual festival, which continues for three days, during which, while they are parading the streets no Christian nor Jew can safely make his appearance, as either would be in danger of being torn to pieces.—*Captain Lyon's Travels*, pp. 9 to 11.

† A beautiful view of it is given by Captain Lyon, with a copy of the remaining inscription, by which it appears that it was a triumphal arch, dedicated to the emperor Aurelius Antoninus, who reigned in the second century.

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the city. It is more than half a mile broad, beyond a cluster of islets, called the *Harbour Rocks*, which you pass by keeping them on the starboard side. From these islets the reef extends, in the above direction, at least one quarter of a mile. Having advanced thus far, you haul in to the westward, with the middle of the town bearing W.S.W. ½ W., [*S.W. by W.*] and may come to an anchor in 5 or 6 fathoms, sandy bottom, with the town W. ½ S. three-quarters of a mile distant; or, at half that distance in 3 or 3½ fathoms.

In Entering, beware of standing too far over to the eastward, as other reefs extend two miles more in that direction, a too near approach to which may be dangerous; and there are, moreover, several rocky flats between them and the shore.

The land to the eastward of Tripoli, toward *Point Tajoura*, is low and sandy, with a grove of pine-trees. The land westward of Tripoli is also low, but it has no trees. In running along this shore, at about 3 miles from it, you will have from 23 to 18 fathoms of water.

At nearly 20 leagues to the westward of Tripoli is the little town ZOARA, off which there is a road, where small vessels take in salt and salt-fish. *Tripoli Vecchia (pr.* Vekkia) or *Old Tripoli*, is a village 7 leagues eastward of Zoara, with a harbour practicable for small craft only.

TIDE.—The rise and fall of the sea at Tripoli is irregular, according to the wind. In a strong northerly gale the rise is full 5 feet, but with a southerly gale not more than two feet.

At the isles Jerba and Karkenna the rise and fall is more regular. A strong current, passing Cape Bon, generally runs to the southward along the coast.

DIRECTIONS for the PORT of TRIPOLI, by CAPTAINS the Hon. R. S. DUNDAS and the Hon. F. W. GREY, R.N.

H. M. S. *Belvidera*, Capt. Dundas, proceeded from the Archipelago to Tripoli on the 5th of July, 1832. On the passage, as commonly found in this season, the winds were commonly light and principally from the northward. On the 13th, in lat. 33° 30′ and long. 13° 50′ having run about S.W. by W. before sunset, high mountainous land was seen to the southward, which is at some distance within the coast: but the shore near Tripoli is low, and seldom seen more than twelve miles off.

In the evening the wind came round to the eastward, and the ship hauled more to the southward, sounding regularly on standing in for the land. At midnight tacked off shore, and stood off and on in from 60 to 40 fathoms, having indistinctly made out the coast by moon-light. At day-break nearly calm, with a thick fog, which lasted till 10 *a. m.* when the water had shoalened to 30 fathoms, and the fog suddenly clearing off, with a breeze from the N.E., the town was discovered, bearing S.E. by S., about four miles off. Steered directly toward it and anchored in 16 fathoms to the northward of the town, as shown by chart, with the round or French fort S. ½ E. beyond half a mile from shore. Afterward shifted farther out, and anchored in 17 fathoms, with the same fort S. ½ W., and the easternmost of the Harbour Rocks S.E. ½ E. This is the safer berth, but commanders must be guided by experience and the state of the weather, as there is no shelter. Here was found a strong current setting along shore to the westward; and it was afterward found that the currents hereabout were very irregular and uncertain, according to the winds.

The winds upon the coast at this season are land and sea-breezes; but once or twice during a month that the ship remained here, fresh northerly winds prevailed, with a disagreeable swell. The land wind, which blows from the southward in the night, commonly draws round to the westward toward day-light in the morning; and, after an interval of calm, the sea-breeze sets in early in the day at N.E., drawing gradually round to East and E.S.E. in the afternoon, when it blows moderately fresh till sun-set. Fogs in the morning are not uncommon.

On another visit made by the *Belvidera* in the commencement of October, same year, the weather for the first ten days was fine, with the usual summer breezes; but toward the middle of the month an evident change took place, preceded by several days' rain; to this succeeded the constant N.W. and northerly gales which prevail upon the coast; and once in this month there was a very severe gale at N.E. The wind in the morning of the 25th (October) was moderate at West, and drew round, as is commonly the case, to N.W. early in the day. In the afternoon it began to freshen, and toward evening it came more round

round to the northward, till at midnight it was blowing a strong gale at North. Before day-light next morning it shifted to E.N.E., and backing afterward to N.E. by N., it blew a heavy and severe gale, with strong squalls and rain, which lasted two days. It then gradually moderated. This was almost the only instance of strong winds to the eastward of north.

In *November* the prevailing winds were moderate at West and N.W., varying sometimes off the land to the S.W. during the night, and in the morning. Once or twice they had dry hot southerly and S.W. winds, which lasted the whole day. Toward the end of the month there were several fresh N.W. and northerly breezes, with rain.

In *December* the winds were constantly between West and North, varying occasionally, in moderate weather, to the southward of west in the night, but blowing more frequently in steady strong breezes at W. by N., with clear cold weather; on other occasions it blew in strong gales, with squalls and rain, at N.W. and N.N.W.

In *January*, (1833,) the winds were more moderate than in December. Frequent light winds off the land at night, and variable moderate breezes in the day; but the usual West and N.W. winds were common in this month. In *February* N.W. and northerly winds were the most frequent; but, on the whole, the weather was moderate. Occasionally, in the latter part of the month, easterly breezes prevailed during the day.

In *March* there were several strong gales from different quarters of the compass. On the 2nd and 3rd of the month the wind blew strong at N.W. On the 5th there was a fresh breeze at East, which moderated at night, and freshened again on the 6th at E.S.E., when it blew in heavy squalls from that quarter, till the 7th, covering the ship with sand and dust. It then moderated and shifted to West. On the 8th and 9th it blew a strong gale at N.W., and top-masts were consequently struck. Between the 10th and 19th the winds were variable, with fine weather; but, near the end of the month, strong winds from the westward occurred frequently, more than land-winds from the southward, and in the night shifted suddenly to West, in hard squalls, with rain.

The month of *April* was generally a fine month, with variable winds. Northerly winds and easterly sea-breezes were common, and dry siroc winds several times occurred.

H. M. S. Actæon, July 14 to August, 1832:—"In running for Tripoli from the northward the *Terhoona Mountains*, which lie from 20 to 30 miles S.E. of the town, first became visible. Soon afterward the low line of coast to the eastward of Tripoli, well cultivated and thickly planted with date trees; to the westward, sandy and desert. This difference may serve to point out to a stranger the position of the town, which is not easily made out at a distance.

Captain Grey has said, "In standing in for the land at night, a ship should not approach nearer than in 20 fathoms, in order to avoid the Kaliusa Reefs (on the eastern side of the entrance,) which lie from a mile to a mile and a half off shore, and extend 2¼ miles to the eastward from the Harbour Rocks.

"In working-up from the eastward, a good mark for keeping to the northward of these reefs are the tower and trees of *Gargaseh*, a village about four miles to the westward of Tripoli, and standing alone in the Desert, kept open of the round fort,* standing on a detached rock under the north or sea-wall of the town. I have tacked with this mark in 16 fathoms. This anchorage in the winter I should consider a very insecure one, as the N.W. winds must cause so heavy a sea as to make it dangerous for a ship to remain at anchor, and difficult to work off. Even during our stay at this season, in two instances with very little wind, so much swell came in as to make communication with the shore very difficult. During the greater part of our stay we had regular land and sea breezes, the latter generally fresh from East and E.N.E.; the land-breezes S.W. and W. There was generally some current taking its direction from the wind, but very uncertain.

"On nearing the land by day the Harbour Rocks will be easily made out, and a stranger may stand boldly in, steering about half a mile to the eastward of the outward rock, until the mark for keeping to the northward of the Kaliusa Reefs comes nearly on. He will then without difficulty make out the English consul's house and garden, bearing S. 30° E. by compass from the outer rock. It is a dark-coloured house of two stories, (the lower one nearly hid by olive trees,) with five windows, the three central ones in a

* The French Fort.—Ed.

semi-

semi-circular projection. At the bottom of the garden is a small summer-house, and between it and the house a still smaller temple with a white dome, which is very conspicuous on entering the harbour.*

The Leading Mark in is, a black mark, on the N.W. corner of the consul's garden wall, on with the central window of the house above described: this leads nearly in mid-channel in from 5 to 7 fathoms.

The mark for the eastern point of the Harbour Reef is the same black mark on with the temple in the consul's garden (above-mentioned); this leads over the point of the reef in 20 feet of water. If kept half-way between the temple and house, it leads clear in 5 fathoms.

The mark for the western point of the *Kaliusa Bank* is, the summer-house on with the centre of the consul's house (as above) leads rather close in, and in 4 fathoms.

"*To run in*, keep the leading-mark on until the highest part of the mole-fortification is open to the southward of the Harbour Rocks; you will then be inside the reefs, and may steer for the sultana's tomb, (two small square buildings with domes,) bearing nearly in one, about one-third of a mile to the westward of the consul's garden, until the temple comes on with the black mark. Beyond this a stranger should not go without a pilot, or without making himself acquainted with the channels which lead into the harbour, and in either of these cases anchoring is recommended, as he will then be in a very good berth, in from 5 to 6 fathoms outside the shoals, well sheltered from northerly or N.W. winds, and open only to the N.E, when the wind would be fair for running in.

The bottom throughout the harbour is of sand, with a slight mixture of mud and numerous beds of weed. Though not very good holding-ground, it is by no means bad, and the *Actæon* never brought her anchors home. The depths are very irregular, particularly in the vicinity of the banks, but least so where the bottom is free from weed. The Tides vary with the wind, but there is a rise and fall of about two feet on the full and change. The landing in boats upon the southern shore of the harbour, in strong northerly winds, is often extremely dangerous, and great caution is required when the sea is seen to break on the Kaliusa Reef.†

COAST EASTWARD of TRIPOLI.—From Tripoli Eastward, the low coast rounds about 11 miles to Cape Tajoura, where it becomes rocky and more elevated. Within this cape on the west, and on the east side of a small river, is the village of Tajoura. Off the mouth of the river is an open roadstead. At 14½ leagues S.E. by E. [*E.S.E.* ½ *E.*] from Cape Tajoura is a projecting point, *Ras al Sahun* or *Cape Sciara*; and at 4 miles to the south-eastward of the latter are the remains of *Leptis Magna*, now *Lebida* or *Lebda*. In a letter dated Malta, 27th May, 1816, and addressed to the late Governor, Sir Thomas Maitland, Captain Smyth has thus described the condition of this place.

"The city itself, called also *Ptolemæa Leptis* and *Lepeta*, is situated on a beautiful plain, bounded by a number of fertile hills, the whole site abounding with vineyards, corn-fields, and pasturage, and groves of olive, date, pomegranate, and lotus trees, the property of inoffensive and civil Arabs, who inhabit the two poor villages called *Lebda* and *Legata*; and who, besides cultivating the adjacent country, rear great numbers of horses, oxen, camels, sheep, and goats.

"The antient city stands on the sea-shore, at the distance of about a mile and a half to the east of the villages, and was formerly divided by a river; the mouth of which formed a spacious basin, which was doubtlessly the port, and was defended by a strong fortress on each side of the entrance, which are still in a tolerable condition. This river, the bed of which is now occupied by a small stream, may, perhaps, have been the *Macæan Cinyps*. The circuit of the city, including its immediate suburbs, is about 8000 yards, and although partly covered by a fine light sand, drifted there by the winds, it exhibits manifest specimens of its former opulence in the grandeur of its gateways, arches, and walls, and in the profusion of scattered capitals, cornices, columns, and other remains.

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* This will be clearly understood by referring to Captain Smyth's plan of the Harbour of Tripoli.

† Marks for the passages within and between the reefs have been given by Captain Dundas in the Nautical Magazine of May, 1835, and by Captain Grey, in that of July, same year.

"The

"The city was surrounded by strong walls, and the public edifices appear not only to have been numerous, but also to have been constructed of the most costly materials, as the eye is met, in every direction, by masses of porphyry, oriental granite, granitic porphyry, and marbles of every description. Although there are some cementitious fabrics, the buildings are generally constructed of free-stone and brecchia, in large blocks without cement, and the shafts of the columns are of a single piece. Most of these sufficiently point out the spots where an interesting and profitable system of excavation might be carried on, and would, no doubt, bring to light many of the statues and bas-reliefs with which temples reared on such a scale of magnificence must have been decorated."

GULF of SYDRA, or the GREATER SYRTIS.—The position of *Cape Mesurata*, [ant. *Cephalæ*,] the N.W. point of the Gulf of Sydra, has been determined by Captain Smyth. The Marabout, which stands a little to the southward of the cape, is in latitude 32° 21′ 26″, longitude 15° 16′ 45″.—On the opposite side of the Gulf (properly *Bay*) are the little port and the town of *Bengasi*, the castle of which stands in lat. 32° 6′ 50″, long. 20° 2′ 56″: the bearing and distance between these places are, therefore, E.S.E. [*E.* ½ *S.*] rather more than eighty leagues, and this may be considered as the breadth of the Gulf, which (from the parallel of Bengasi) is 35 leagues in depth.

"All the world," says Captain Smyth to the Baron von Zach, "know that the two *Syrtes* are the great gulfs on the northern coast of Africa, between Carthage and Cyrené, and that they were the terror of the antient mariners: I did not find it a coast desolate, melancholy, and without form, but we saw distinctly how the waves, which are perpetually breaking against the shore, wash and leave the rocks uncovered which abound on this coast, and which are also strewed with the remains of many wrecks. Horrible swamps, however, seem to extend over a space of about 200 miles, and are so perfectly level that they appear rather like a sea than a shore.* On other parts of the coast are few or no dangers excepting several little heads of rocks, scattered about different points. The tides are insignificant. With the hand-lead going, a vessel may approach all parts of the coast between Mesurata and Cape Rasat, which is 35 leagues beyond Bengazi. This is a singular contradiction to the reports of the difficulties that the antient navigators pretended to have found: but it is necessary to reflect that vessels should not enter into this gulf when chased by tempests which it is impossible for them to resist; for, in rough weather, the sea rises here to a prodigious height.

"But of what utility can it be to enter here? there being but one place in the whole gulf worthy of being called a port. We could find anchorage for small vessels only at *Boshaifa* and *Braiga*, at the bottom of the gulf, and Ghara Isle, *Karhora*, and *Bengazi* on the eastern coast.

"At *Zaphan*, 33 leagues to the south-eastward of Cape Mesurata, the land rises a little. Off this place there are from 100 to 80 fathoms at the distance of 12 miles from shore. The coast is healthy even to Shevaisa, Medina Sultana, Booshaida, Shakka, and Kudia: the last point is the highest of all this part of the gulf. There is a Marabout very near, named *Ben-gau-raude*, opposite to which the water is not so deep as off Booshaida, and there is an extensive sand-bank eastward, as shown by the chart.

"On the east, and toward the north, the lands are of a moderate height: they are lower than *Karhora*, and thence decline to a swamp. To the N.E. the land rises and embranches with the chain of the Cyrenean mountains, which soar nearly to the height of 1600 feet above the level of the sea."

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* The *Baron von Zach* observes that the fogs, prevalent here, are not the fogs of the damp mists of the north, but the dry thick haze, of which the air is so full, in a hot season, in the Mediterranean Sea; and which is described by Captain Beaufort as prevailing on the coast of Karamania, from the middle of the month of June to the end of August.

It seems to be more than probable that a current from the west may, at times, set strongly down the bay; and this, augmented, as it may be produced, by a wind to the westward of north, will readily account for disasters arising from being embayed here.—*Edit.*

The *Mirage*, or effect of unequal refraction in the atmosphere, is not unfrequent here. The Baron von Zach has said, "The Arabs of the Desert have known for centuries the phenomenon of the Mirage, or the suspension of objects in the air, before it was understood by the physiologists of Europe. It is called *Sirraub* in their tongue, and is spoken of in the Koran.

"Seamen are now well acquainted with this phenomenon, which is produced by a great difference between the temperature of the water and the air; and in the deserts by this difference between the air and the sands."—*Corr. Baron de Zach*, x. 606.

BENGASI [antient *Berenice*] has a good harbour for small vessels, and the inhabitants carry on a considerable trade with Marseille, Venice, Tripoli, &c. in butter, honey, wax, and ostrich feathers; besides this, the inhabitants participate in the infamous slave-trade of the interior country, in common with those of Tripoli, &c.

CAPE RASAT, &c,—The extremity of Cape Rasat, as determined by Captain Smyth, is in 32° 55′ 56″ N. and 21° 38′ 54″ E., and it lies at the distance of 108 leagues E. ¾ S. [*E. ¼ N.*] from Cape Mesurata.

On the summit of the mountain, at about 10 miles to the south-eastward of the cape, stood the antient city of Cyrené, formerly so celebrated for its knowledge, riches, and elegance. This place is at present called *Grenna*. The fine springs from which it derives its name are more abundant than ever. It is situated in a charming and beautiful country, quite different in climate and all respects from all other between Syria and Tunis. The difference is exhibited in the hills, valleys, woods, and pasturage; the whole copiously watered by rivulets and other streams, and constituting a most picturesque landscape. In the town, besides houses and monuments, are two antient theatres, an amphitheatre, and a stadium.*

At four leagues to the eastward of Cape Rasat is the little port called *Marsa Susa*, antiently *Apollonia*, the port of the city of Cyrené. From this spot the coast rounds south-eastward, 40 miles, to the town of *Derna*, whence butter, wax, and wool, are exported to Alexandria.

CAPE RAZATIN is 26 miles S.E. ¼ E. [*E.S.E.*] from Derna. Some rocks lie about the cape, and within them is *Port Razatin*, a little harbour for small vessels. At Cape Razatin the coast takes a southerly direction, and, in this direction, at 4 leagues from the cape, are the road and harbour of *Bomba*, where there is good anchorage.

BOMBA was visited by Captain Smyth, in 1821, and he has described several islets and rocks in the vicinity. A temporary observatory was fixed, (near a pond of fresh water in the harbour,) and hence the adjacent points were determined. Without the entrance, on the north, is a very high rock, which resembles a ship, and now named the *Ship Rock*: it stands in 32° 27′ 22″ N. and 23° 12′ 8″ E. At 4¾ miles to the southward of the Ship Rock is an islet, now named *Menelaus*, which lies off *Tank Point*, forming the harbour, and in latitude 32° 22′ 24″, longitude 23° 16′ 25″. Another islet lies off the southern shore of the bay, at 4 leagues to the south-eastward of Menelaus Isle, and from the circumstance of several seals being seen upon it, Captain Smyth has called it *Seal Isle*. This lies in latitude 32° 14′ 16″, longitude 23° 20′ 2″. Another islet, *Bhurda* (commonly called *Bomba*) lies near the middle of the bay in 32° 21′ N., and 23° 17′ E. In the bay is a moderate depth of water, 20 to 12 fathoms, decreasing to the shore.

PORT TOUBROUK, otherwise *Trabouca*, is a little harbour, at 16 leagues eastward of Bomba, and is the last that is included in the territory of Tripoli.

5.—COASTS OF LIBYA AND EGYPT.

GEODETIC POSITIONS.	Latitude N.			Longitude E.		
Cape Luko (*Ras al Milher*)	31°	54′	0″	25°	3′	0″
Port Saloumé	31	33	35	25	13	21
Ishaila Rocks	31	31	17	26	39	44
Al Matrou; rocks	31	33	47	27	6	33
Ras al Harzeit	31	22	20	27	23	45
Ras al Kanais	31	15	32	27	52	25
Tanhoob or Taanoupe	31	10	50	28	28	0
Point Djumeima	31	4	15	28	45	0
The Arab's tower	30	58	15	29	34	20
Marabout Isle, near Alexandria	31	8	51	29	47	36
Point Eunostos	31	11	31	29	51	28
Cleopatra's Bath (Old Harbour)	31	9	52	29	52	0
COLUMN of ALEXANDRIA	31	10	45	29	54	0

* A *Stadium*, with the Greeks, was a space, covered or uncovered, about 625 feet long, used for races and other games.

Pharos

GEODETIC POSITIONS, *continued.*	Latitude N.			Longitude W.		
Pharos or Lighthouse of Alexandria	31°	12′	35″	29°	53′	27″
Aboukir Tower	31	20	35	30	6	0
Rosetta (*Raschid*)	31	25	0	30	28	20
Damietta (*Damiat*)	31	25	43	31	49	30
Cape Kasaroun	31	10	40	33	3	25
El Arishe; fort	31	5	30	33	48	25

The whole of the extensive, sterile, and uninteresting, coast between Cape Razatin and Alexandria, comprehending a length of more than 125 leagues, has been examined by Captain *Smyth*.—The greater and enormous errors of the charts of this coast had previously been ascertained by Capt. *P. Gauttier*, of the French navy: and, from the united labours of both, we are enabled to give the bearings and distances of the most prominent points, &c.

	Magnetic.		*True.*	*Miles.*
Cape Razatin to Cape al Kourrat	S.E. by S.	—	S.E. ½ E.	— 35
Cape al Kourrat to Port Toubrouk	S.E. ½ E.	—	S.E. by E. ½ E.	— 23
Port Toubrouk to Cape Luko, or Ras al Milher, or el Mellah	S.E. by E. ½ E.	—	E. by S.	— 50
Cape Luko to Port Salloumé or Sallouni	S. ½ E.	—	S.S.E.	— 25
Port Salloumé to Cape el Ahlem, or Ahlem Lareca	E. ½ S.	—	E. by N.	— 43
Cape el Ahlem to Rocks off Tifarrh (ruins)	S.E. by E. ½ E.	—	E. by S.	— 14
Cape el Ahlem to Ras al Harzeit or Cape Elaoudseid	E.S.E.	—	E. ½ S.	— 74
Ras al Harzeit to Ras al Kanais or Cape Alkanais	S.E. by E. ½ E.	—	E.S.E. ½ E.	— 25
Ras al Kanais to Cape el Efabou Sambra or Point Tanhoob	E.S.E.	—	E. by S.	— 29
Point Tanhoob to Abousir or the Tower of the Arabs	E.S.E.	—	E. by S.	— 60
Abousir to the Marabout Isle	N.E. by E. ½ E.	—	N.E. ½ E.	— 17
Marabout Isle to the Pharos or Lighthouse of Alexandria	N.E. by E. ½ E.	—	N.E. ½ E.	— 6

There are many rocky reefs upon the coast, which must be cautiously avoided; particularly at the point of *Port Toubrouk*, and at two leagues more to the eastward; the latter called the *Ahal-Rocks*: there is, also, a great extent of rocky shore about and to the westward of Cape Luko. The *Tifarrh* or *Turfaoui Rocks* (above-mentioned) lie at four miles from the land: the *Echehairi* or *Ishaila Rocks*, 5 leagues more to the eastward, are at a mile and a half from it, and extend 4 leagues to the eastward.

In the neighbourhood of *Abousir* or the *Arabs' Tower*, [antient *Taposiris*,] the coast, to a great extent, both East and West, is dangerous; and it is said that a shoal, with 4 fathoms of water on it, and 8 fathoms around it, lies at about three miles from shore, with the Arabs' Tower bearing S.W. by S. and the only palm trees between that tower and Marabout Isle E.S.E. ½ E.

H. M. sloop *Victorieuse* also discovered, some years ago, a rock nearly of the size of a ship's cutter, with only 9 feet over it, and 5 fathoms around it: from this rock the Arabs' Tower bears S.E. by E. 5 or 6 miles; the hill to the eastward of Arabs' Tower, E.S.E., and the extremes of the land in sight East and W.S.W. It is about three miles from the nearest shore.*

ALEXANDRIA.—The city of Alexandria, in latitude 31° 12′, and longitude 29° 53′, stands on the *Pharos Isle*, an isthmus, or neck of land, of a T shape, which forms two ports, one to the N.E. and the other to the S.W. The north-eastern or *New Port* is in form of a crescent, with the city on its S.W. side: and the distance between its extreme points is seven-eighths of a mile. The south-western or *Old Port* [ant. *Eunostos*], has an extent along shore of six miles, with the city at its N.E. end, and many shoals of rock, sand, and mud, on the side next the sea.

* It seems probable that this was the rock on which H. M. sloop *Parthian* was wrecked, some years ago.

The

The S.W. point of the Pharos Isle or isthmus, is Point *Eunostos* or *Eunost*; it is an irregular rocky point, with a fort upon it, and its position, as ascertained by Captain Smyth, is, latitude 31° 11′ 31″, longitude 29° 51′ 28″. The *N.E.* or *Pharos Point* bears from Point Eunost N.E. by E. ½ E. [*N.E.* ½ *E.*] one mile and three-quarters distant. The coast between is entirely bordered with rocks, both above and under water.

Eastern or New Port.—On the Pharos Point, stands a square castle, with a light-tower upon it, which is lighted every night: the castle is not formidable, as it contains only 12 thirty-two pounders and six mortars. On the opposite point, which is seven-eighths of a mile to the east, is a small tower or lighthouse, the *Pharallon*. The ground around the port is altogether shoal, and so impeded by ballast and rubbish as to admit only the boats of the country to the shore. The castle on the west side, now on the extremity of a mole, is supposed to occupy the site of the antient *Pharos*.

Pharallon. *Pharos, E.S.E. magn. a mile and two-thirds.*

The houses of the city have all flat terraces, which give them the appearance of being without roofs. There are not less than thirteen minarets, and there are two churches, Greek and Catholic, each attached to their respective convents; both stand east of the city, on the broken plain between the two walls. Nearly all the houses of the city are built with brick, taken almost entirely from the Roman remains of the antient city. There are many good houses, but the streets, excepting that of the Franks, are narrow and dirty. The country round is a flat sandy desert, and in the city are no other trees than a few palms.

At the S.E. corner of Alexandria is a large unpaved square, which, during the invasion of Egypt, was devoted to the exercise of the troops, and has hence acquired the name of the *Parade*. On its south side is the Turkish burial ground. The parade is the fashionable evening walk.

The Frank quarter of the town, in which the consuls and European merchants live almost exclusively, is on the bank of the *Old Port*. The houses, generally Khans, called here *Okellas*, are well-built and commodious: they are constructed on the same plan as all the khans in the Levant: a small strong door leads into a large quadrangle, on which looks a gallery from the first floor, and on this gallery open apartments occupied by different families or travellers. The apartments have no other door than that which leads into the gallery; their windows look into the street. The residence of the English consul is in the *New Port*, near the Parade, at the S.E. corner of the town. At the north end is an old castle, and half-way between is the *Dogana*, or Landing-place.

Alexandria contains about 36,000 or 40,000 persons; of whom foreigners amount to nearly 5000. Of the Arabs, the higher order are merchants, and the lower petty tradesmen, porters, camel-drivers, &c. The chief exports consist in corn, rice, cotton, and drugs, to Europe; and the imports are mostly European manufactures. The winds most common here are the N.W. and S.E. in summer, and West in winter. The siroc is, of course, the hottest; but, at times, the N.W. wind is so fresh that the windows must be kept shut, and a violent tornado is not uncommon.

Excessive sultriness is caused by an east wind, called here the *Kampsein*, which is, in this country, always hot and damp. Mr. Burckhardt says, that this name is derived from *Khamsyn* (fifty) because such winds are computed to last fifty days, that is, from the 29th or 30th of April, to the 18th or 19th of June, which is the period of the *Nokhta*, or dew, when the river first begins to rise in Egypt.

View of Alexandria when the Pasha's Harem bears S. by E. ½ E. one mile and a quarter, and Fort Ada S.E. ½ E. (by compass.)

Among

Among the recent and extraordinary improvements of Alexandria, and its environs, are a new harem or palace of the pasha on the Pharos Isle, at half a mile from Eunostos Point; and, on the opposite of the *Old Harbour*, at three-quarters of a mile southward from the city, are magazines, with a mole; the latter were built with the spoils of antiquity, and contains 128 columns, mostly of red and gray granite.

The modern city of Alexandria covers an extent of not more than one-fifth of the antient city, the walls of which still exist, and include two elevated forts, extensive gardens, three convents, (Greek, Coptic, and Catholic,) a synagogue, the antient cisterns, ruins, &c. *Al Kaliss*, or the *New Canal*, which will be noticed hereafter, terminates at the New Granary above-mentioned. The celebrated pillar, commonly called *Pompey's*, is situated on a small height, about a quarter of a mile from the southern wall. It is of red granite, and nearly 99 feet in height, exclusive of the elevation on which it stands, and is, therefore, a conspicuous mark from sea.*

"Every description of this city, which I have yet read, fails to give a correct idea of it: to us it was like an apparition of the antipodes, or of an entirely new world. Passages lined with stalls, crowded with men of every colour, sleepy dogs, and harnessed camels; hoarse cries set up on all sides, mingled with the shrill cries of women, and of children half naked; a suffocating dust, and in the midst of it men of rank, in magnificent dresses, skilfully managing beautiful horses in rich trappings. These together will give you an idea of what is called a street in Alexandria."—*M. Champollion, jun.* 1828.

SAILING DIRECTIONS.—Ships for Alexandria, when advancing from the westward or N.W., should endeavour to make the Tower of the Arabs, which is very remarkable, being situated between two black hills, on the westernmost of which are the ruins of a castle, appearing, at first sight, like a ship under sail: this is the highest land on the coast, and may be seen 7 leagues off. The soundings are tolerably regular; there are 90 fathoms at about 6 leagues off the land; but in the night, or in thick weather, it will not be prudent to advance into less than 25 fathoms, when you will be 8 or 9 miles off. On running along the coast from abreast of the Arabs' Tower, you will descry a high round hill, which may, in clear weather, be seen 7 or 8 leagues off; and, as you approach this, you will see *Pompey's Pillar*, which is equally remarkable, and appears like a lofty sail; by these Alexandria may be known. The soundings will, also, point out the part of the coast, for to the westward of Alexandria the water is deep near the land, but to the eastward it is shallow. Hence there is a difference in the colour of the water; that to the westward of Alexandria being clear; that to the east muddy: again, the land to the westward of Alexandria is entirely bare of trees, while to the east it is higher, more unequal, and has trees; but to some distance eastward of Alexandria there is a chain of low sand-hills, with a few palms only.

OLD PORT.—The CHANNELS into PORT EUNOSTOS, or the OLD HARBOUR of Alexandria, are formed by numerous reefs and shoals, which were never exactly known until they were surveyed by Captain Smyth. These shoals form the principal entrances, of which the first and southernmost, called the *Marabout Channel*, is the best: and it lies at three-quarters of a mile to the north-eastward of a tower on Marabout Isle, with depths of 6 to 4½ fathoms, whence you proceed inward S. by E. and S.S.E. toward some rugged points of land, behind which are the banks and wells of the Watering-place. Having advanced to a quarter of a mile from shore, you may proceed upward, or north-eastward, along shore at pleasure, keeping at the same distance, until you are within the western arm of the Pharos Isle; here you anchor with the town within the distance of half a mile in from 5 to 7 fathoms, and at nearly an equal distance from the several shores. Proceeding as above, all the shoals will be left on the larboard hand.

Ships coming in, for either of the harbours, will always be clear without the shoals when the Pharos castle is open to the northward of all the land, until they get opposite to the channel by which they mean to enter.

The *Central* or *Middle Channel*, of the Old Harbour, is 2½ miles to the north-eastward of the tower on Marabout Isle: there is a reef on each side of it, and in it are two spots

* *Pompey's Pillar*, as it is called, stands on a small eminence between the walls of Alexandria and the shores of Lake Mareotis, and quite detached from any other building. It is of red granite, and the shaft is highly polished. It is of the Corinthian order, and 99 feet in height. An inscription, in the fulsome language of the times, dedicates the column to the emperor *Diocletian*.

of

of 3 and 4 fathoms: its general depths are 5 and 6, increasing inward to 10, fathoms, upon a S.E. course toward the shore.

An Officer of H.M.S. *Samarang* says, "In proceeding for the Old Harbour, by the *Central Channel*, take care and keep the Pharos Castle open of Point Eunostus, (as above mentioned,) in order to avoid the reefs which extend along this coast, until you open a cut, about a small sail's breadth, in a dark island close to the shore. Bring this cut to bear S.E. ¼ S., and it will lead you through the Central Channel, and in not less than five fathoms; keeping on that course until you shut in the Pharos Castle, and opened the windmill to the southward of the pasha's palace. You may then haul up to the eastward for the anchorage, taking care not to shoalen less than to 7 fathoms on your larboard hand, and take up your berth as convenient. (1827.)

Notch in the Isle.

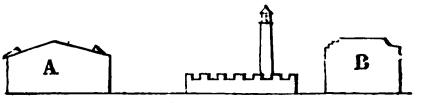
"Supplies are plentiful and cheap. Watering convenient when you can water at the Nile. At other times you must send to Marabout.

"Further remarks made on coming through the Central Channel, on the 11th of October, 1828.

"The mark above stated appeared to me to be the best to the eastward of the fort. This cut in the Black Isle kept S. 41° E., will, I make no doubt, lead you safe through the channel. It may be difficult to gain sight of it in consequence of its being so narrow; and the sea, at times, breaks over the whole of the Black Isle. When the tower or Pharos was on the pasha's palace, the pilots informed me that we were in the narrowest part of the Central Channel."

Skilful pilots (Arabs) are generally to be obtained.

Appearance in steering to the N.E., between the two reefs, to enable us to fetch through the channel, as annexed.



Pharos and Castle between the Palaces A B.

Remarks by Mr. Robt. Stewart, Master R.N., Dec. 1826.—*If bound for the Old Harbour*, run in with the town of Marabout, (East of Marabout Island,) bearing S.S.E., known by the number of lateen rigged vessels in the harbour. Taking care to keep the Pharos castle open to the northward of Point Eunostos, where stand the palaces of the pasha, will keep you clear of all the outward dangers of the reefs, until you open the remarkable cut like a water-fall, on the small dark island close to the shore. Steer in with this mark open, S.E. ¼ S., and it will lead through the middle channel of the reefs, in not less than 5 fathoms of water. Three round hummocks will be seen eastward of the island, when the cut is on the proper bearing, about half a ship's length, forming to the westward a small valley, which gradually rising, forms a peaked hummock. This peak on with the cut in the island is the sure mark. But hummocks along this coast are so numerous and alike, that no stranger should with the most full and complete directions, attempt this passage, or any other through these dangerous reefs, without a local guide. The cut in the island is toward its eastern end; it extends through; is the work of art, and immediately opposite the antient canal into the Lake Mareotis.

The pilot-boats lie in the channel with the above mark open; and they indicate, by waving a flag, to starboard or port, the course of the ship. For, if the cut is *shut in*, your ship will be on shore, on one side or the other, of the channel. Having shut in the Pharos Castle, and opened the windmill to the southward of the pasha's palace, you will be inside of the reefs, and may steer E. by N. for the harbour, anchoring where you please.

The pilots do not usually come on board till you are inside the reefs; being afraid, if out of their boats, of losing the proper mark, which mark is not wider than an English turnpike road, but is very remarkable when once seen. They farm their right of pilotage from the pasha, and are anxious that the marks for the channels may be known. This was the only channel passed through by H.M.S. *Raleigh*, and is generally esteemed as the best.

The Eastern Channel of the Old Harbour is three quarters of a mile to the S.W. of Point Eunost, and one-sixth of a mile from a remarkable square rock, which lies to the northward of it: a smaller rock marks the south side: this channel is narrow, and opposite

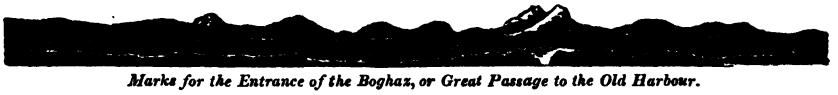
opposite to it, eastward, is a rocky bank, in form of a bar, with only 2 and 2¼ fathoms. Those who cross this bank, will find that within it the depths increase to 8 and 9 fathoms, bottom of sand and weeds.

NEW PORT of ALEXANDRIA.—The EASTERN or NEW HARBOUR may be readily known by the square castle of the Pharos, with its light-tower, which stands at the extremity of a long mole, constructed of stone, having arches through which the water passes. At a cable's length from the point is a rock above the water, called the *Diamond*; this you must pass on your starboard side, at about a ship's length, and then anchor off the west shore in 2¼, 3, or 3½, fathoms. The shoal bank on this side of the harbour is nearly as broad as the length of the mole, and there are spots of 2 and 2¼ fathoms in the middle of the harbour. This port is entirely open to the north; and vessels using it must buoy their cables, to prevent their being cut by the foul ground, which lies in almost every part of it.

Vessels advancing directly from the N.W. for the *New Port*, will cross the Pharos Bank, a bar which lies at half a mile without the Pharos, and extends 2¼ miles N.E. by E. and S.W. by W. directly athwart the entrance of the port. On the middle of it is a spot of 4¼ fathoms, and near each end 6 and 7 fathoms; on the outside, generally 10 to 12 fathoms; on the inside 8 to 11 fathoms. Near the Lighthouse and Diamond Rock are from 5 to 6 fathoms; and there is a narrow passage of 4¼ and 4 fathoms between the latter and the castle.

Of ALEXANDRIA the harbours were re-surveyed by *M. le Saulnier de Vauhello*, captain in the French navy, in 1834, and for the Central Channel, otherwise the Boghaz, or Grand Pass, he gives the leading mark annexed.

Boghaz Sand-hills, S.E. (magn.)



Marks for the Entrance of the Boghaz, or Great Passage to the Old Harbour.

This channel is distinguished by the sea breaking upon a rock on either side of it. These rocks, called the *Kot* and *Fara*, are upon the inner edge of the outer banks. Should there be no sea, a boat should be anchored in the pass, in about 5 fathoms; thence haul to the southward of the northern rock, *El Kot*, until the marks are again in one; whence you may proceed up the Harbour to the N.E., as shown by the chart.*

BAY of ABOUKIR.—From the Pharos castle of Alexandria to the little isle of Aboukir, or Abukeer, off the west point of the bay of that name, the course and distance are N.E. by E. ½ E. [*N.E. ½ E.*] 5 leagues. The whole of the coast, as already noticed, is low and sandy. From Aboukir Isle the Rosetta or western mouth of the Nile bears E.N.E. ½ E. [*N.E. by E. ½ E.*] 16 miles; and the land between is the low and semi-circular coast of the bay rendered so memorable by the battle of the 1st and 2nd of August, 1798. On the point of the bay, at 2¼ miles south-westward of Aboukir Isle, is the old castle of Aboukir, which is small, insignificant, and surrounded by rocks and islets. A reef also extends nearly half a league to the N.E. from the isle, and is very dangerous. It was on the extremity of this reef that the *Culloden* struck, in proceeding to the attack of the French fleet.

THE VOYAGE TO AND FROM ALEXANDRIA.

The "Hints of a Voyager," to and from Alexandria, given in the 'Nautical Magazine' of December, 1836, are worthy of especial notice. The writer says that the best cargo to take to Alexandria is coals; and iron, with the precautions that he has prescribed, may be taken.

On the voyage out, if you have a chronometer, you may make the land about Cape Finisterre; and, with north-easterly winds keep the coast in sight to Cape St. Vincent, and shape a course for Cape Spartel, as in case of meeting an easterly or south-easterly wind, anchorage under the cape may be obtained. From the Strait you should shape a course for Cape de Gat; but when in the Mediterranean make no long tacks, never more than 25 miles from either side of your direct track, as the winds are too variable to allow an expec-

* The chart here referred to, exhibiting the new forts, &c., was republished at the Hydrographic Office, London, 1840.

tation

tation of their continuance in any one direction, and the currents are influenced by the direction of the land as well as by the wind.

The port of Alexandria is spacious, and the approach by day is safe, as the water is deep close to the reefs. The Pasha's palace, Pompey's pillar, and the masts of the ships, are always visible before you approach danger. A stranger should attend to his lead, as the soundings are a *sure* guide. If the day is on the wane, haul off; do not lose time, and you make your vessel secure:—for should you obtain a pilot, (which is not likely, unless the weather be remarkably fine,) and get in, you will find that the custom-house, consul's office, and all other places, have long been closed.

Captains of merchant-vessels, before they leave England, should be regardful in signing Charter-parties, as by neglecting this their homeward bound freight will be charged a commission of 2½ per cent. by the merchant to whom their outward cargo is consigned, and deducted from the freightage.

Owing to the late improvements water is easily obtained; but its free use is to be guarded against, as producing dysenteries, &c.: it is however very soft, makes capital tea, and washes well. Meat is obtained at the market at very reasonable prices, and the mutton though small is good. Pigeons and quails in season are plentiful and cheap, with vegetables, potatoes excepted. Commanders are advised to carry a sufficiency of salt provisions for their voyage home.

On leaving Alexandria, work up to Candia; the average summer passage to Malta is 22 to 30 days; in winter, from 18 to 25; but the vessels that have pursued the above-mentioned track have had the shortest voyages. To the southward of the isles of Lampedusa a current of one mile an hour, S.W. by S. by compass, was found by a trial in a calm evening. Vessels are recommended to pass the Esquerques by Cape Maritimo; as, in a fleet of seven vessels, those which came by Cape Bon lost some two, some three, days' time, from being embayed when the wind changed to the N.E., previous to its blowing a levanter or from east.

Should the wind be contrary, make Sardinia; then work along the African shore to Algier; thence make and keep the Spanish shore until you sight the rock Gibraltar; with a westerly wind you may anchor behind the rock, and save the dues, which in quarantine are considerable.—Eleven dollars for anchoring, and expenses for guard-boats, &c.

Having passed Tarifa, Cape St. Vincent ought to be made; but caution is requisite, especially by night, in order to avoid the *Dædalus Rock*, (described in the Book of Directions for Spain and Portugal,) and which was seen by Capt. Neate, in the brig *Astrea*, of Belfast, who saw the sea breaking over it, and who described its appearance to be like that of a half-tide rock. From Cape St. Vincent, should the wind be north-easterly or northerly, stretch to the westward. "We reached 23° W., and were in port, (Milford Haven,) sooner than those which kept closer in shore."—W. S.

Steam Navigation to and in the Mediterranean Sea.

The British steam-vessels, conveying the Indian mails *viâ* Marseille and France, take passengers with the mails, according to a scale laid down by Government. The passage is the most rapid in the Mediterranean. The *Alecto*, *Prometheus*, &c. generally make their passage in three days from Marseille to Malta, and from Malta to Alexandria in four days, and sometimes less; making the passage from London, through France, to Alexandria, in 13 or 14 days. These steam-vessels are capable of accommodating from 40 to 50 passengers, and afford most excellent accommodations. The *Prometheus* made her last voyage from Marseille to Malta, a distance of 645 miles, in 65 hours. The cabin passage, including every thing, is £9 sterling from Marseille to Malta, and £13 from Malta to Alexandria. The commanders are naval officers.—*Malta, 31st August*, 1840.

Contract-Steamers to Alexandria.—On the 1st of September, 1840, the first of the Oriental Steam Company's vessels, the Oriental, of 1500 tons, and 450 horse-power, was to start from Southampton for Alexandria, touching at Gibraltar and Malta only, and carrying the Government mails and dispatches. She was expected to arrive at Malta on the 9th and at Alexandria on the 14th of September. The new line of steam-vessels, for the India-mails, are thenceforward to leave England for Gibraltar, Malta, and Alexandria, on the first of every month, and Alexandria for Malta, Gibraltar, and England, from the 20th to the 25th of every month, making the passage each way, under ordinary circumstances in fourteen days. A branch steamer will run twice a month between Malta and

and the Ionian Islands with mails, passengers, goods, and parcels. Each vessel will carry a medical officer, appointed or approved of by Government, and the time occupied in the passage home will be allowed in the quarantine. *Office in London, No. 51, St. Mary Axe.*

A large and powerful steam-ship is to be sent out to commence a line of communication between Calcutta, Madras, Ceylon, and Suez, in connection with the line to Alexandria. In the intermediate region, iron steamers are to be placed on the Nile, for the conveyance of passengers, &c., between Atfe and Cairo [Kahira] by which they will be enabled with certainty to reach the outward steamer at Suez, and the homeward steamer at Alexandria, as soon as the mails.

See, upon this subject, Mr. Usborne's "New Guide to Egypt, the Levant, and Syria;" a most useful and important volume, published in 1840, pages 93 and 105. For the Egyptian measures, weights, and moneys, the reader is referred to the same work, pages 133, 4, 5, 6.

Trade with Egypt.

Mr. Galt, in his Letters of 1810, has given the following remarks on sending merchandise into Egypt. The process of sending merchandise into Egypt is as follows: the ships go to Alexandria, where they put their goods into small vessels for the Nile, and they are sent up the river to Cairo.

The goods which suit the Egyptian market are, cloths of every description; muslins, fine and ordinary; silks, plain and embroidered; velvets of all kinds, red, blue, and green, indeed of all colours; velveteens of the same description; gold and silver lace, ordinary or point d'espagne; ribbons of all kinds; shalloons of all kinds: the latter article is now made much better and cheaper in Anatoli than in England. Hardwares, such as needles, shears, thimbles, knives, gun and pistol-locks, sell to a great extent; handkerchiefs of all sorts and colours; a few hats; lead, shot, and powder; buttons, of the best hawksbill form, a vast number; striped muslins, narrow for turbans, a great quantity; nankeens and printed cottons also in large quantities; jewellery, also, of all descriptions; watches, with Turkish dial-plates; vast quantities of nails are annually consumed; and compasses with oriental characters are also suitable for the market of Grand Cairo.

The ANNUAL INUNDATION of the Nile, which fertilizes so large a portion of Egypt, commences at Cairo in the month of June, and is at its height in October, the greatest rise being twenty-four feet. The waters begin to subside in the same month, and in December the fertile mud which they have left on the low grounds is sown with grain. Where the stream is confined within high banks the land is fertilized by canals cut from the river, from which the water is distributed by machines, &c. At Alexandria the plague season commences about the 20th of February, and ends about the 20th of June.

ADDENDA.

1.—Cursory Remarks on the Winds, Tides, and Currents, of the Mediterranean Sea.

WINDS.—Of the winds little more need be said beyond what may be found in the preceding pages; but, as connected with the Levantine winds, and the intercourse between Alexandria and the *Red Sea*, the following remarks may, also, be acceptable.

The winds in the Red Sea are periodical. About the latter end of May the northerly winds usually commence blowing down all the Red Sea, and continue till October. From October to May the southerly winds prevail in the *southern* latitude of the Red Sea only. In the northern latitudes the northerly winds prevail during the whole year. The limits of the two opposite winds, or the region of change, may be placed between the 18th and 20th

degrees of latitude. In June, July, and August, the northerly winds are strongest near Suez. The end of June and beginning of July is the proper season of arrival at Alexandria. The northerly winds do not commence in the southerly part of the Red Sea till the end of May, and continue till October."—*Naut. Mag.* No. 6, 317.

TIDES and CURRENTS.—We have noticed, in the 9th page of this work, that in the MEDITERRANEAN SEA, generally, the TIDES are inconsiderable, mostly irregular, and with respect to rise and fall, in many parts imperceptible, as the motion of the water in those parts seems rather owing to the impulse of the wind; notwithstanding this, the lunar influence is manifested, in many cases, by the changes of stream, and in others by the periodic rise and fall, both on the northern and the southern shores. See the Remarks on Currents and Tides in the Channel of Corfu, page 175; in the Archipelago, 197, 198, 200, &c.

It has also been shown that, in settled weather, and under ordinary circumstances, when the great current has its regular course into the Mediterranean, we may calculate that, on the African coast, generally, a ship sailing eastward toward Sicily will be set a-head of her reckoning; it having been ascertained that, between Sardinia and the main, the current, under such circumstances, sets eastward; as it does across the mouth of the Gulf of Tunis, and along the southern coast of Sicily. The current, in general, continues easterly along the Libyan coast, and E.N.E. off Alexandria; thence, advancing to the coast of Syria, it sets N.E. and more northerly; so that country vessels bound from Damietta to an eastern port of Cyprus, have been carried by the current past the island. Captain Beaufort has shown that, between Syria and the Archipelago, there is a constant current to the westward, which is diffused in the open sea near Cape Khelidonia. (*Directory*, Vol. ii., p. 249.)

In a letter which we have seen, addressed to the late *Major Rennell*, by Admiral *Sir J. T. Duckworth*, this gentleman incidentally observed that in the Archipelago, when not obstructed by its numerous islands, the current has always a southerly set: it passes on either side of Candia; takes Cyprus at a very slow rate, where it meets a set from the Nile. The tide at Cyprus has no certain time of rising, but the water swells sometimes to the height of 4 or 5 feet. The same remark applies to the Syrian coast, where the rise is only two feet. All this is accordant with the preceding descriptions.

REMARKS, made on the SURVEY of the NORTHERN COAST of AFRICA, by Capt. A. BERARD, 1833.

The current off the coast, between Algier and the isle Galita, generally sets to the East. Its greatest velocity has been observed off Cape Matifou, Cape Bingut, and Cape Bougaroni, where it has been found running at the rate of two miles in the hour. Its mean velocity is from one-half to one mile. In the proximity of the shore and in the bays it frequently runs to the West, and in various directions by the effect of the efflux. In the environs of Cape Ferro and of the Isle Galita it has likewise been found setting to the West, and near the Sorelli shoals to the S.W.

The winds, in general, follow the direction of the coast, but not to the bottom of the bays, where light land and sea-breezes may be found. Easterly winds prevail from the month of May to September, and are generally accompanied by fine weather. They are announced by a light fog or mist at the horizon and on land, and by a copious dew at night.

Westerly winds prevail from October to April. When fresh they are commonly succeeded by adverse weather. These winds are frequently preceded by a sudden clearing of the horizon and land.

In winter, a great swell from the north indicates the approach of a gale of wind from that direction, which is the most formidable wind in these parts.

Sometimes, near the end of the month of September, N.E. and East winds blow strongly over the Bay of Bona.

There is not, on this coast, any bay wherein large ships may find shelter at all times. The port of Algier and the roadstead of Bougia, where you may carry fasts on shore, are the only places where small vessels may attempt to pass the winter. The anchorages of Fort

Fort Genois [Genovese] and of the Casarin, of Bona, and that of the Isle Galita are good during the summer, and of these the first is the safest in the winter season. Vessels may, however, occasionally anchor near Matifou, Ginet, Dellys, Mers el Fahm, to the west of Cape Bougaroni, at Kolah or Collo, at Ras Toukousch, (more to the east,) and at Tabarca (long. 8° 45′ E.) but cannot remain at these places without favorable winds from shore.

We have given in the note (*) page 11, some remarks on the temperature of the sea, to which the following may be added.

"From experiments made by M. Bérard, 23rd of November, 1831, it appeared that, while the temperature of the air was 59°, and of the surface water 58°, that at 750 fathoms was 55°. This result accords with those made by M. D'Urville, in the same sea, 1826, who, at the depth of 200 fathoms, found 54°; at 300, 54°; and at 600, 54°.

Hence it appears that, in the western parts of this sea, below 200 fathoms, the temperature of water is nearly uniform at 55° or *temperate*. This temperature is much higher than that of the water of the ocean, which, in northern latitudes, is less than 40°, while, between the tropics it requires a depth of 1000 or 1200 fathoms to obtain this temperature.

On the 26th of June, between Minorca and Algier, the air was at 75°; the surface water 69½°; the temperature at 1200 fathoms, 55°. And again, near the same place, air, 74°; surface, 73½°; at 600 fathoms, 55°. The same temperature, 55°, was found at 750 fathoms in November.

2.—POINTS of the COMPASS, *in* ENGLISH, FRENCH, ITALIAN, &c.

Points.	*French.*			*Italian.*		
* *North.*	*Nord.*	*		*Tramontana.*	*	
1 N. by E.	Nord quart N.E.	11°	15′	Tramontona quarto Greco.	11°	15′
2 N.N.E.	Nord nord-est.	22	30	Greco Tramontana.	22	30
3 N.E. by N.	Nord-est quart de N.	33	45	Greco quarto Tramontana.	33	45
4 N.E.	Nord-est.	45	0	Greco.	45	0
5 N.E. by E.	Nord-est quart-d'est	56	15	Greco quarto Levante.	56	15
6 E.N.E.	Est nord-est.	67	30	Greco Levante.	67	30
7 E. by N.	Est quart N.E.	78	45	Levante quarto Greco	78	45
8 *East.*	*Est.*	90	0	*Levante* or *Levanta.*	90	0
* *North.*	*Nord.*	*		*Tramontana.*	360	0
1 N. by W.	Nord quart N.O.	11	15	Tramontana quarto Maestro.	348	15
2 N.N.W.	Nord nord-ouest.	22	30	Maestro Tramontana.	337	30
3 N.W. by N.	N.O. quart-de nord	33	45	Maestro quarto Tramontana.	326	15
4 N.W.	Nord-ouest.	45	0	Maestro.	315	0
5 N.W. by W.	N.O. quart-d'ouest.	56	15	Maestro quarto Ponente.	303	45
6 W.N.W.	Ouest nord-ouest.	67	30	Ponente Maestro.	292	30
7 W. by N.	Ouest quart N.O.	78	45	Ponente quarto Maestro.	281	15
8 *West.*	*Ouest.*	90	0	*Ponente.*	270	0
* *South.*	*Sud.*	*		*Ostro* or *Mezzo Giorno.*	180	0
1 S. by E.	Sud quart sud-est.	11	15	Ostro quarto Scirocco.	168	45
2 S.S.E.	Sud sud-est.	22	30	Ostro Scirocco.	157	30
3 S.E. by S.	Sud-est quart de sud.	33	45	Scirocco quarto Ostro.	146	15
4 S.E.	Sud-est.	45	0	Scirocco.	135	0
5 S.E. by E.	Sud-est quart-d'est.	56	15	Scirocco quarto Levante.	123	45
6 E.S.E.	Est sud-est.	67	30	Scirocco Levante.	112	30
7 E. by S.	Est quart sud-est.	78	45	Levante quarto Scirocco	101	15
8 *East.*	*Est.*	90	0	*Levante.*	90	0

Points.	*French.*			*Italian.*		
* *South.*	*Sud.*	*		*Ostro* or *Mezzo Giorno.*	180°	0′
1 S. by W.	Sud quart sud-ouest.	11°	15′	Ostro quarto Libeccio.	191	15
2 S.S.W.	Sud sud-ouest.	22	30	Ostro Libeccio.	202	30
3 S.W. by S.	S.O. quart-de-sud.	33	45	Libeccio quarto Ostro.	213	45
4 S.W.	Sud-ouest.	45	0	Libeccio.	225	0
5 S.W. by W.	S.O. quart-d'ouest.	56	15	Libeccio quarto Ponente.	236	15
6 W.S.W.	Ouest sud-ouest.	67	30	Ponente Libeccio	247	30
7 W. by S.	Ouest quart S.O.	78	45	Ponente quarto Libeccio	258	45
8 *West.*	*Ouest.*	90	0	*Ponente.*	270	0

Compass Card — Rose de Vents. *(Rose of Winds.)* — Fiore del Mondo. *(Flower of the World.)*

Points of the Compass, *Airs de Vent.*

By those Italians who use *Mezzo Giorno* for South, which seems equally common with *Ostro*, S. by E. is expressed by *Mezzo di quarto Scirocco*; S.S.E. *Mezzo di Scirocco*; S.E. by S., *Scirocco quarto Mezzo di*; S. by W., *Mezzo di quarto Libeccio*; S.S.W. *Mezzo di Libeccio*; and S.W. by S., *Libeccio quarto Mezzo di.*

POINTS in GREEK and TURKISH.

GREEK.—North, *Boreas*; N.W., *Skiron*; West, *Zephyros*; S.W., *Lips*; South, *Notos*: S.E., *Euros*; East, *Apeliotes*; N.E., *Kaikias.*

By the TURKISH NAVIGATORS the Principal points of the Compass are denominated as follows:

NORTH, *Yldiz*; N.N.E., *Yldis Porias*; N.E., *Porias* or *Borias*; E.N.E., *Gundogousi Porias*; East, *Gundogousi*; E.S.E., *Gundogousi Kechichléme*; S.E., *Kechichléme*; S.S.E., *Kible Kechichléme.*

SOUTH, *Kible*; S.S.W., *Kible Lodos*; S.W., *Lodos*; W.S.W., *Baty-Lodos*; West, *Baty*; W.N.W., *Baty-Karayal*; N.W., *Karayal*; N.N.W., *Yldis Karayal.*

This we have copied from a French chart of the Black sea, by *M. Bellin*, 1772; and the names should be accentuated and pronounced accordingly.

3.—GENERAL RULE for the GUIDANCE of STEAM-VESSELS, extracted from a NOTICE given by the Hon. Corporation of TRINITY HOUSE, London, 30th October, 1840.

"As STEAM-VESSELS may be considered in the light of vessels navigating with a fair wind, and should give way to Sailing vessels on a wind, on either tack, it becomes necessary only to provide a rule for their observance, when meeting with other steamers, or Sailing vessels going large. The RULE is as follows:—

"When STEAM-VESSELS on different courses must unavoidably or necessarily cross so near that, by continuing their respective courses, there would be a risk of coming in collision, each Vessel shall put her HELM TO PORT, so as always to pass *on the* LARBOARD *side of each other.*

"A STEAM-VESSEL passing another in a narrow channel, must always leave the Vessel she is passing *on the* LARBOARD *hand.*"

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